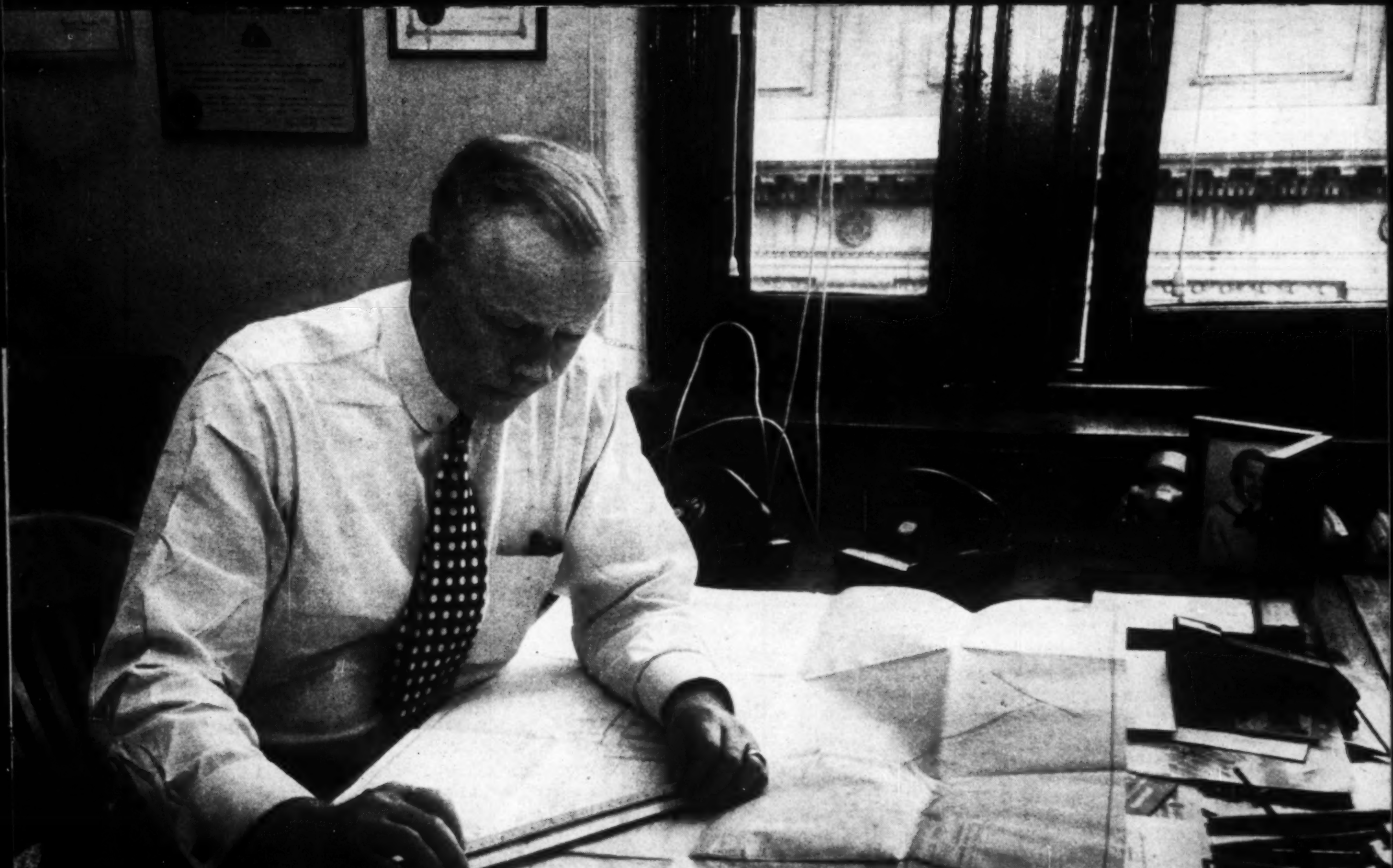
ENGINEERING NEWS-RECORD



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TO KEEP CORROSION FROM "CALLING COLLECT"–

Pacific Telephone & Telegraph Company used

WROUGHT IRON PIPE for this Radiant Heating System

This radiant heating system, serving 22,500 square feet of floor area in Pacific Telephone & Telegraph Company's new warehouse at San Leandro, California, is an excellent example of the Company's insistence on durability. More than 16,300 feet of corrosion-resistant wrought iron pipe was used to safeguard the system against premature failure and costly repair.

The system, planned and designed by PT&T's Engineering Department, features some interesting construction details employed to protect the floor against damage from heavy fork-lift trucks and impact caused by bouncing reels of cable. After the 10-inch structural slab was poured, wrought iron pipe coils were laid in place. Over the pipe coils, a wire mesh was stretched to strengthen the concrete "topping" slab, and contribute to more even heat distribution. Then the pipe and mesh were covered with 3 inches of concrete. A metallic floor hardener was applied to the surface.

Architects for the project were Thomsen & Wilson, San Francisco. The system was designed by Harry S. Haley, San Francisco Consulting Engineer, in collaboration with Pacific Telephone & Telegraph Company engineers. The installation was made by Scott Co., Bay Area Mechanical Contractors.

Wrought iron pipe is ideally suited for this service because of its ease of installation, dependability in service. It takes short radius bends, without springback. It produces sound welds, free from pin-hole leaks. Its uniform structure assures sharp, full-depth threads. And because of its mechanical strength, wrought iron pipe withstands damage during installation. In service, wrought iron stays on the job longer, costs less per year.

Our bulletin, *Wrought Iron Pipe for Radiant Heating*, gives complete details, documents service records. Write for a copy.

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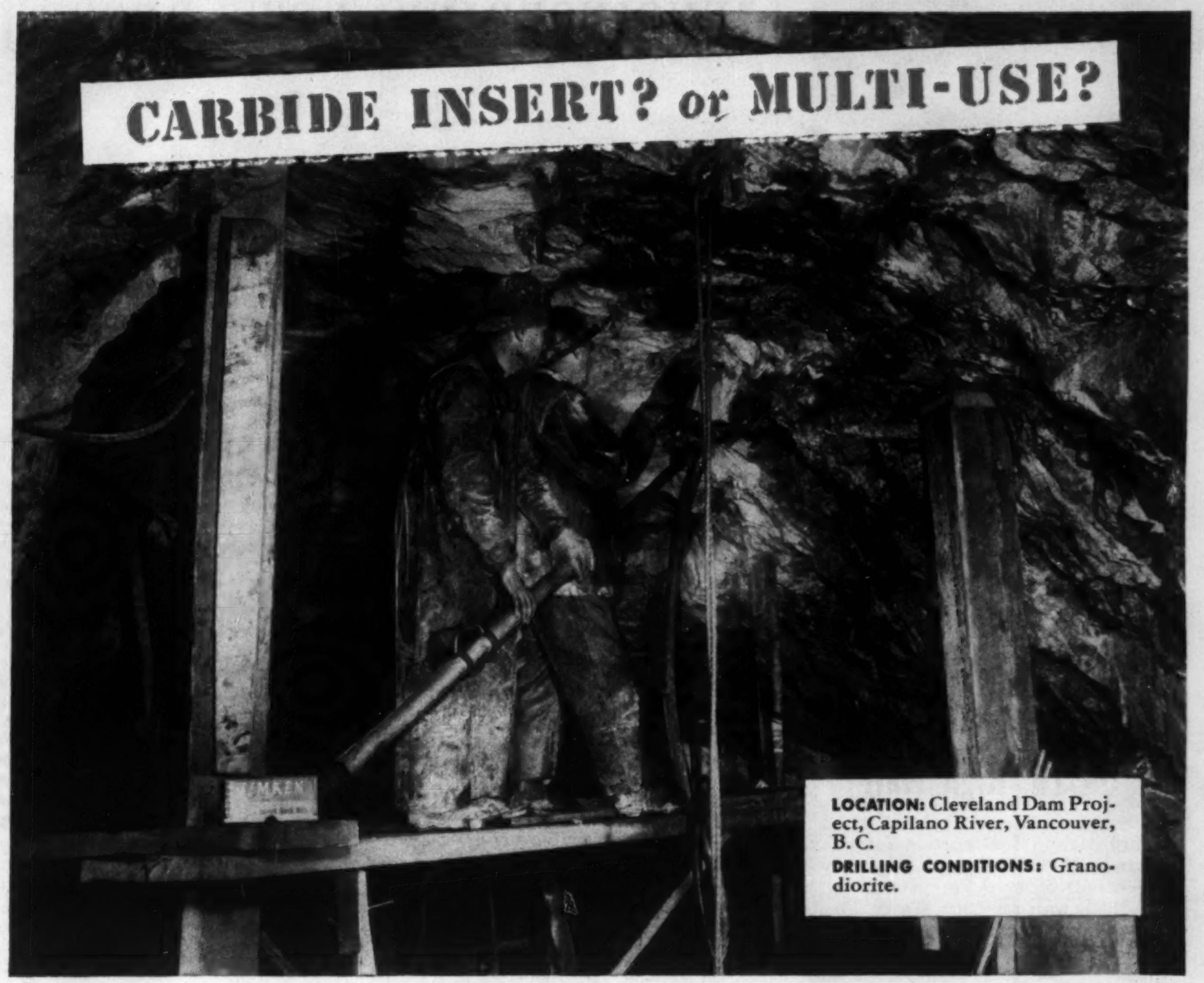
CARBIDE INSERT? or MULTI-USE?



LOCATION: Cleveland Dam Project, Capilano River, Vancouver, B. C.

DRILLING CONDITIONS: Granodiorite.

TIMKEN® carbide insert bits chosen in competitive tests for Cleveland Dam

TO insure the best bit performance on the Cleveland Dam Project, Capilano River, Vancouver, B.C., the contractor chose his bits through competitive tests. Several other makes of rock bits were tested, but Timken® carbide insert bits won out. They were used from the start of the job to the finish.

Timken carbide insert bits are most economical for constant-gauge holes, small-diameter blast holes and very deep holes. And they're your best bet for highest speed through hard and abrasive ground such as the very hard Granodiorite encountered on the Cleveland Dam job.

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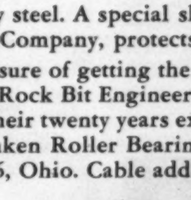
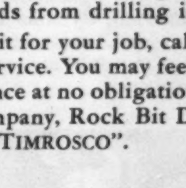


Timken threaded multi-use rock bit



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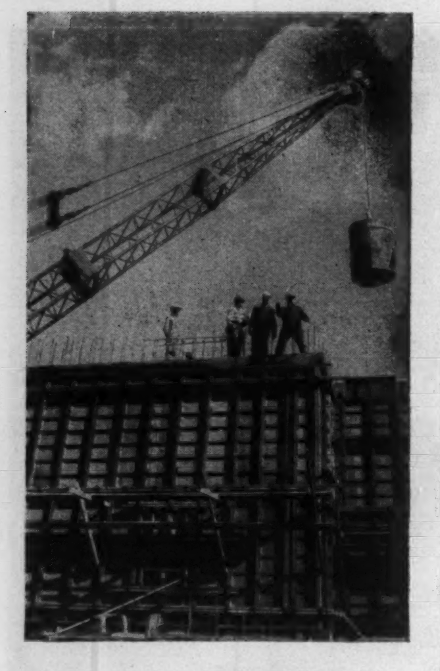

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On 16' High Wall

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Robert F. Boger
Publisher

September 22, 1955 ENGINEERING NEWS-RECORD Vol. 155, No. 12

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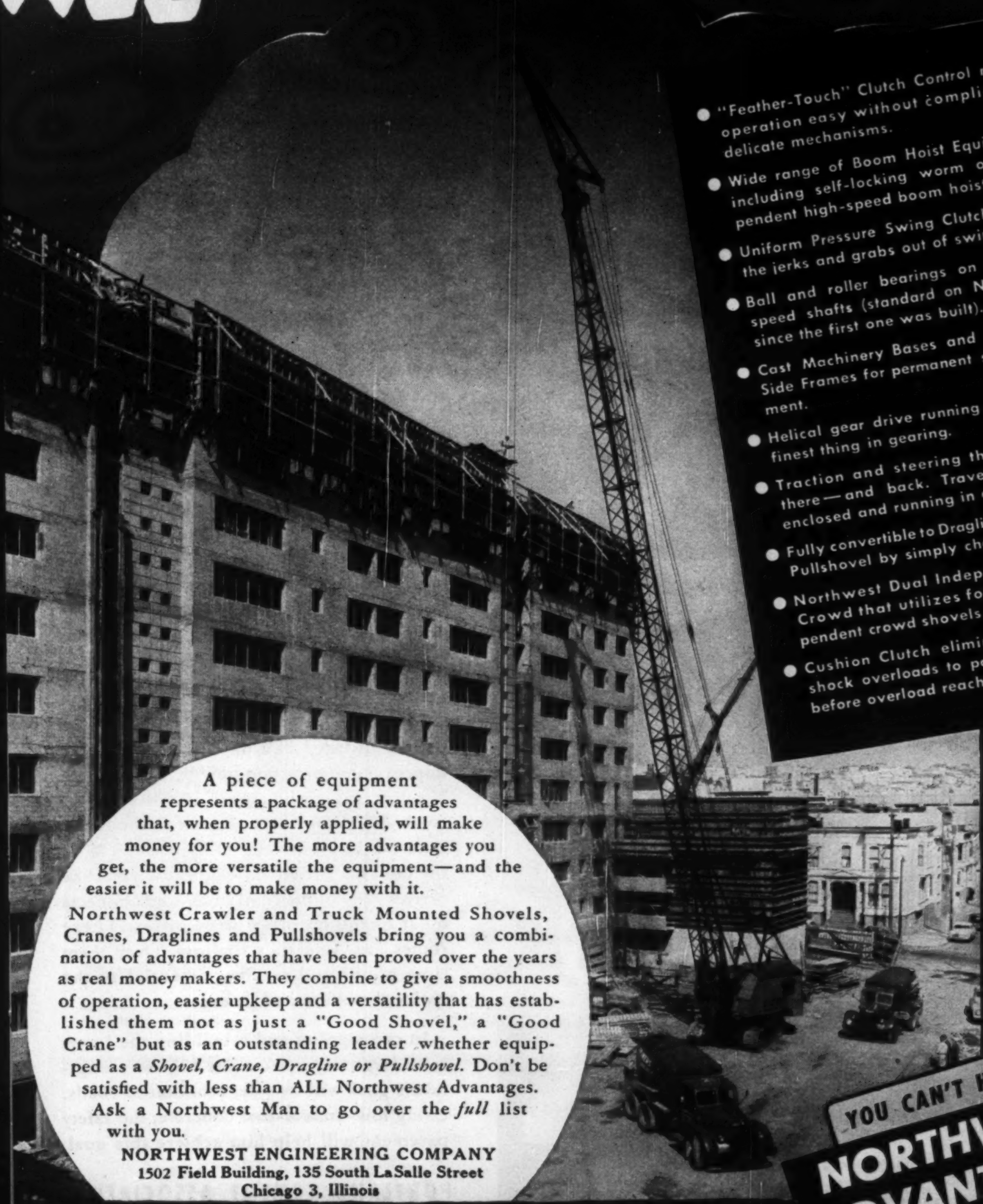

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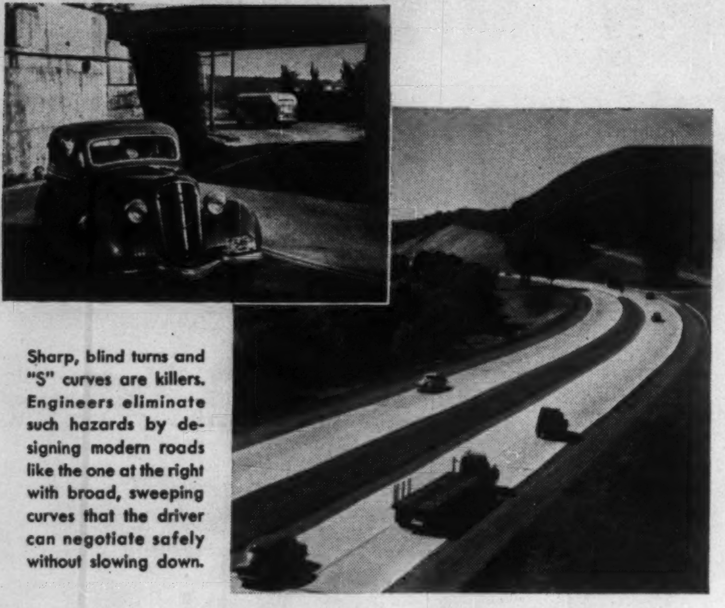
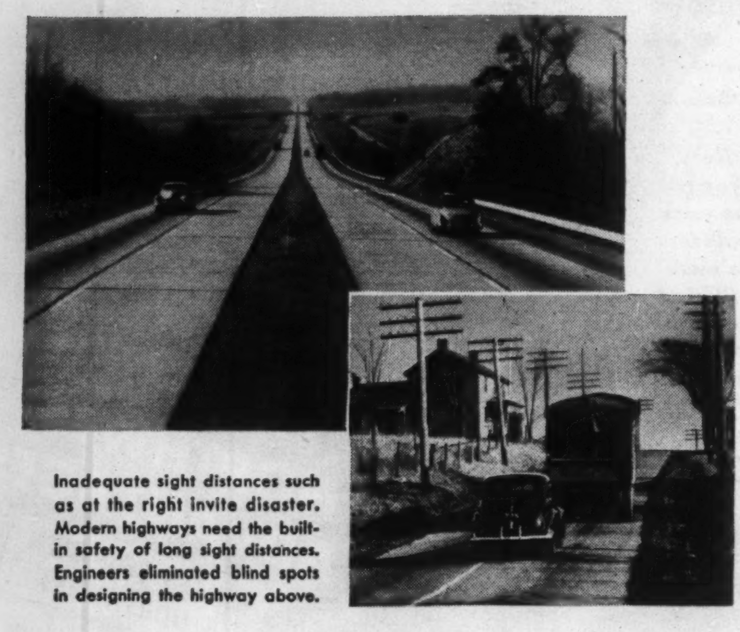


Sharp, blind turns and "S" curves are killers. Engineers eliminate such hazards by designing modern roads like the one at the right with broad, sweeping curves that the driver can negotiate safely without slowing down.

Narrow bridges (right) are dangerous. Today engineers design bridges wide enough for expected traffic (above).



Inadequate sight distances such as at the right invite disaster. Modern highways need the built-in safety of long sight distances. Engineers eliminated blind spots in designing the highway above.

The Highway *Engineer* Is Solving America's Highway Crisis

America has outgrown its highways. There are 58 million vehicles jammed onto a road system designed for half that number. No one foresaw the tremendous increase in weight, volume and speed of traffic—developments that make yesterday's good roads congested and hazardous for today's traffic.

That so many of the concrete roads built in the '20s—and even earlier—are still serving is a tribute to engineering foresight and the durability of the pavement.

Now a new generation of highway engineers faces the gigantic task of redesigning and rebuilding the nation's roads. Behind the men who'll meet this challenge are years of scientific research and engineering analysis—the teamwork of engineers and scientists in colleges, government, the Portland Cement Association and other organizations. This cooperation has produced the knowledge and skills to build safer and more durable concrete roads than ever before.

In the next 10 years billions of dollars will be invested in a nation-wide highway improvement program now being planned. Needing attention first are 40,000 miles of roads designated by Congress as the Interstate Highway System. Only about 1% of the country's road mileage, this network carries 20% of the rural traffic and connects most of the nation's large cities. These routes are America's lifelines. Over them flow goods and services essential to the national welfare and defense.

In redesigning and rebuilding the Interstate Highway System the highway engineer's goal will be safe, economical roads. Using ***low-annual-cost*** concrete, the safety pavement, will help him achieve this goal.

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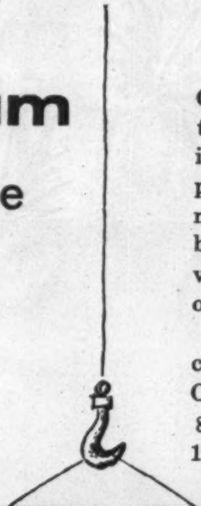

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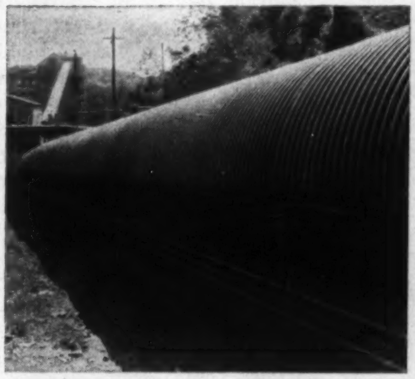

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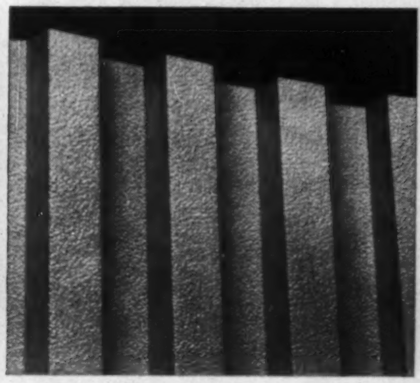

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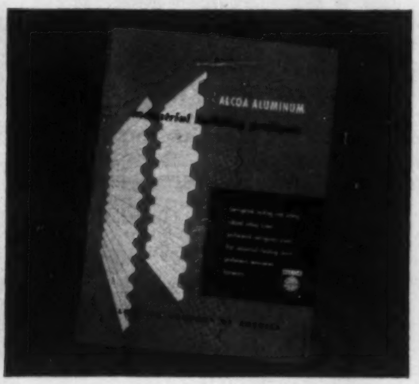

Alcoa Aluminum Industrial Building Products are completely described in Alcoa's A.I.A. File No. 12-C. Write today for your copy!

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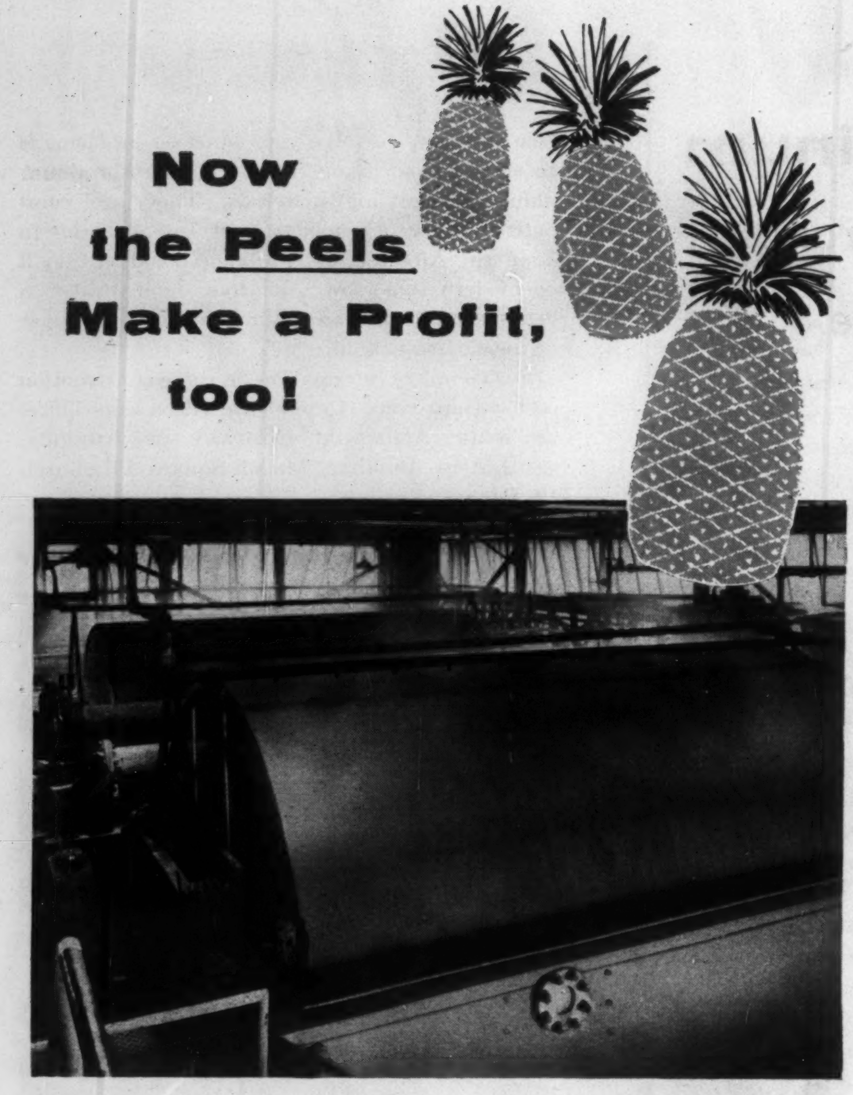
and concrete . . . through scientific research and engineering field work



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READER COMMENT

City Traffic Problems

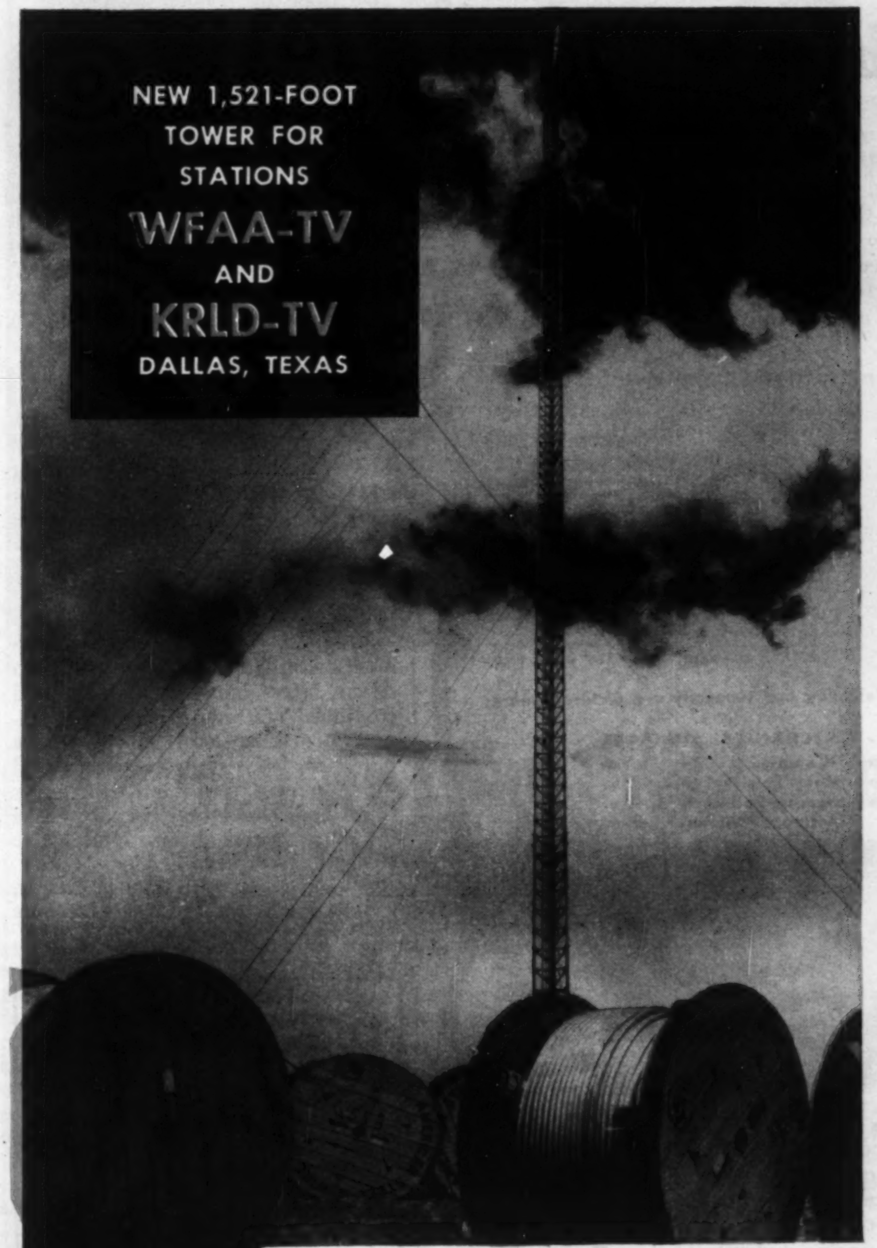
SIR—Your article about the limitations of freeways in the issue of Aug. 25, p. 38, indicates that someone is beginning to get near the solution to the problem of urban transportation. At least there is recognition of the fact that the great load on highways arises from the failure of public transportation.

But more progress is needed. I suggest examination of the matter from the public interest. Highways and public transportation both exist to furnish transportation without which the modern city cannot exist. The total transportation cost for almost any urban situation can be minimized, and at the same time maximum public convenience can be provided by means of an integrated system involving highways, railroads and other devices. This should not be surprising. Everything else about our civilization is complex; it should surprise no one to learn that transportation is also not simple. Furthermore, anything that prevents the development of such a system and so causes increases in total transportation cost or reduction in public convenience is not in the public interest.

In this context the matter of subsidies or tax exemptions for public transit, or the specific manner of collecting highway money are all beside the point. No one talks of the possible need for tax exemption for highways, or of trying to make them entirely self-supporting. Even self-liquidating toll crossings cannot succeed unless tied to a network of free and hence tax-supported roads. The attempt to make certain components of the integrated system self-supporting from fares alone, much less taxpaying, merely creates an insatiable demand for wholly or partly tax-supported facilities.

Transportation money, including highway money, therefore should be spent in such a manner as to get the public the most service for its dollars. This is done by building coherent systems including, as applicable, roads, good public transit and other facilities. Emphasis must be on "good" since if public transit components are mediocre or poor they will not carry their share of the load. This procedure would result, often, in less highway building but more transportation building, and would produce more public convenience at lower cost, when all costs are accounted for. The biggest real obstacle is the lack of

What holds up the TALLEST TV TOWER in Texas?



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High in the sky of Texas, the new Dallas TV tower has taken its place among the world's tallest man-made structures. It is 1,521 feet high . . . topping the Empire State Building by 49 feet. What's more, it supports not one, but two 82-foot TV antennas, with provision for a third.

To make it tough for designers, the tower had to withstand Texas wind velocities up to 155 miles per hour. This problem was solved by bracing the tower with 30 Tiger Brand galvanized guy lines ranging in size from 1⅜" to 2" in diameter. These are anchored in concrete as far as 1050 feet from the tower. The larger guy lines are designed to withstand pulling stresses up to 245 tons.

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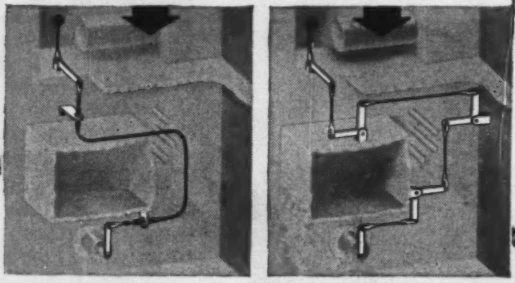
Many Points of Wear • Increasing Back-Lash • Loss of
Accuracy • Vibration Rattles



"Solid as a rod but *Flexible* as a wire rope" is a good description of TRU-LAY PUSH-PULL REMOTE CONTROLS. This flexibility makes it possible to snake around obstructions as shown in the picture at the left . . . permits the ideal arrangement of all control elements . . . greatly simplifies installation of controls by reducing the number of working parts . . . damps out noise and vibration. Versatile, Accurate, Adaptable, Rugged . . . they are the ideal remote controls for Construction Equipment.

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READERS COMMENT

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Flood Control by a City

SIR—In your splendid editorial "Can Flood Control Cope With Flash Floods" (ENR Sept. 1, 1955, p 124), I noted in the final paragraph that the Hoover Commission had stated that present legislation puts too small a share of the cost of flood control works on the benefited communities. Elsewhere in the editorial it is also suggested that stream channels should be cleaned of debris accumulated over many years in order to increase their flow capacities.

I believe a case in point is exemplified by the village of Mamaroneck, New York, where our local board of trustees voted an appropriation of some $9,200 to clean, straighten and clear of debris the Mamaroneck River channel. The work was done by local employees operating rented tractors, shovels, etc.

Previous to this channel improvement, flash flood troubles had been serious after almost every heavy and continued rain storm. Since the improvements, at local expense, have been effected, we have experienced the torrential rains of Hurricanes Carol and Hazel of 1954 as well as the more recent heavy rains. The village had not been flooded.

RALPH H. MANN,
American Wood Preservers Institute
New York, N. Y.

CALENDAR

Atomic Industrial Forum, Sheraton-Park Hotel, Washington, D. C., Sept. 27-29.

International Road Congress, Dolmabahce and Yildiz Palaces, Istanbul, Turkey, Sept. 26-Oct. 16.

Building Research Institute, conference on metal curtain walls, National Academy of Sciences, Washington, D. C., Sept. 28-29.

American Public Works Association, congress and equipment show, Milwaukee, Wis., Oct. 2-5.

Federation of Sewage and Industrial Wastes Associations, Ambassador Hotel, Atlantic City, N. J., Oct. 10-13.

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Designated CD-32-1 and CD-48-1, these newly designed machines maintain the condensers in a fully charged condition at all times . . . preventing condenser deterioration and reducing current drain from the batteries to a negligible quantity. This keeps the condensers at the same potential as the batteries. Result: greatly prolonged battery and condenser life, less need for service in the field.

The continuous-charge feature also eliminates the elapsed time between depressing the ready switch and the lighting of the neon lamp. As soon as the ready switch is pressed, the light glows, and the blast can be fired at once by pushing firing button. Result: faster operation.

These powerful, efficient machines retain the excellent characteristics of all CD Blasting Machines: light-weight . . . great safety . . . no moving parts . . . absence of costly permanent shooting lines . . . ability to fire large numbers of caps in series or parallel series.

If you would like complete information on the improved CD-32-1 and CD-48-1 Blasting Machines, see the Du Pont explosives representative in your area, or write to E. I. du Pont de Nemours & Co. (Inc.), Explosives Department, Wilmington 98, Del.

OWNERS OF CD-32 and -48 BLASTING MACHINES may have them converted to the improved CD-32-1 and -48-1 machines for a moderate charge. Ask the Du Pont representative in your area for details.

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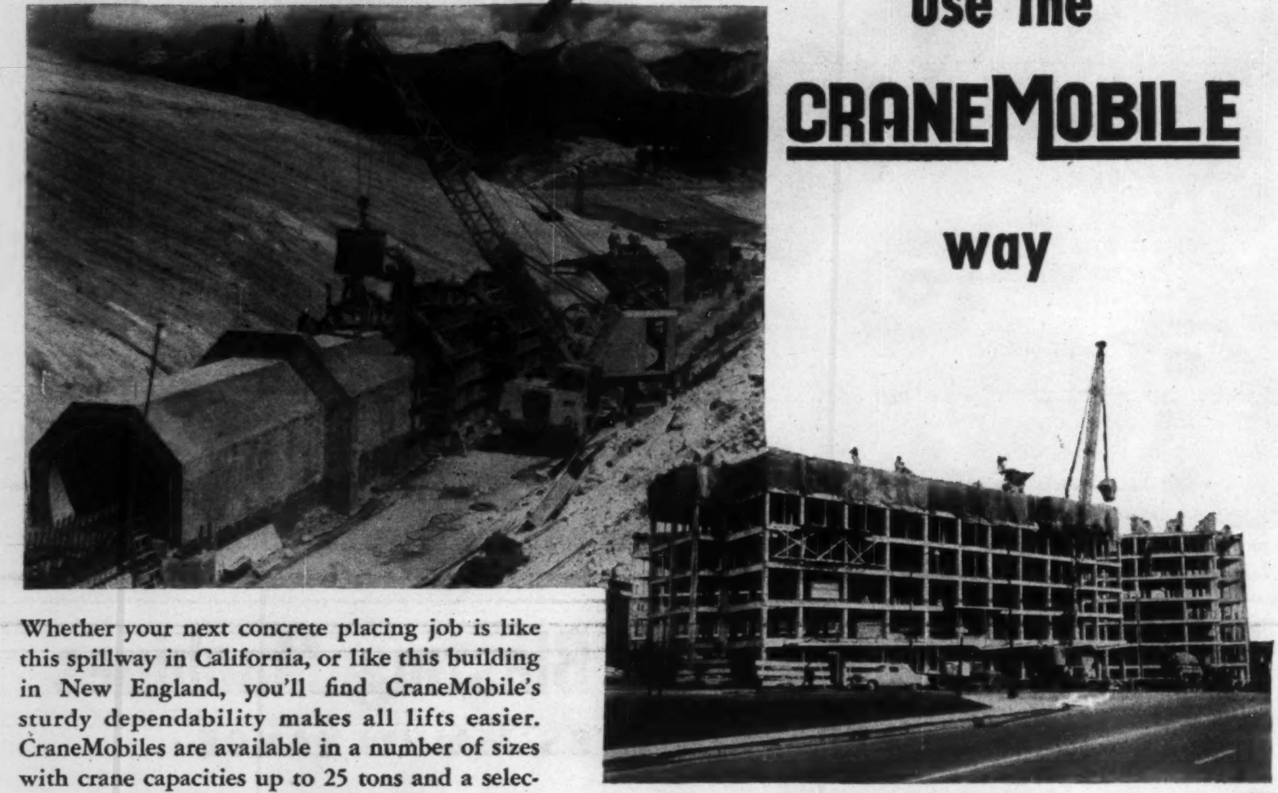
from California . . . to New England contractors everywhere use the CRANEMOBILE way



Whether your next concrete placing job is like this spillway in California, or like this building in New England, you'll find CraneMobile's sturdy dependability makes all lifts easier. CraneMobiles are available in a number of sizes with crane capacities up to 25 tons and a selection of BAY CITY built carriers to meet all job requirements. Here is a rubber-tire-mounted crane packed with operating advantages and special refinements that mean *bigger value* and greater versatility on job after job.

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- **A collapsible high-gantry which permits lifting maximum recommended boom lengths from horizontal without outside assistance.**
- **An accurate, fast, independent boom hoist which raises or lowers boom or boom and load by power only.**
- **A power load lowering device that may be quickly engaged or disengaged to handle lowering of heavy loads smoothly and with precision.**

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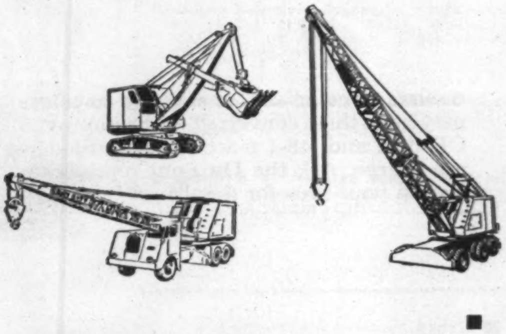


BOLTING SPEEDS ERECTION

of New Building in Dallas

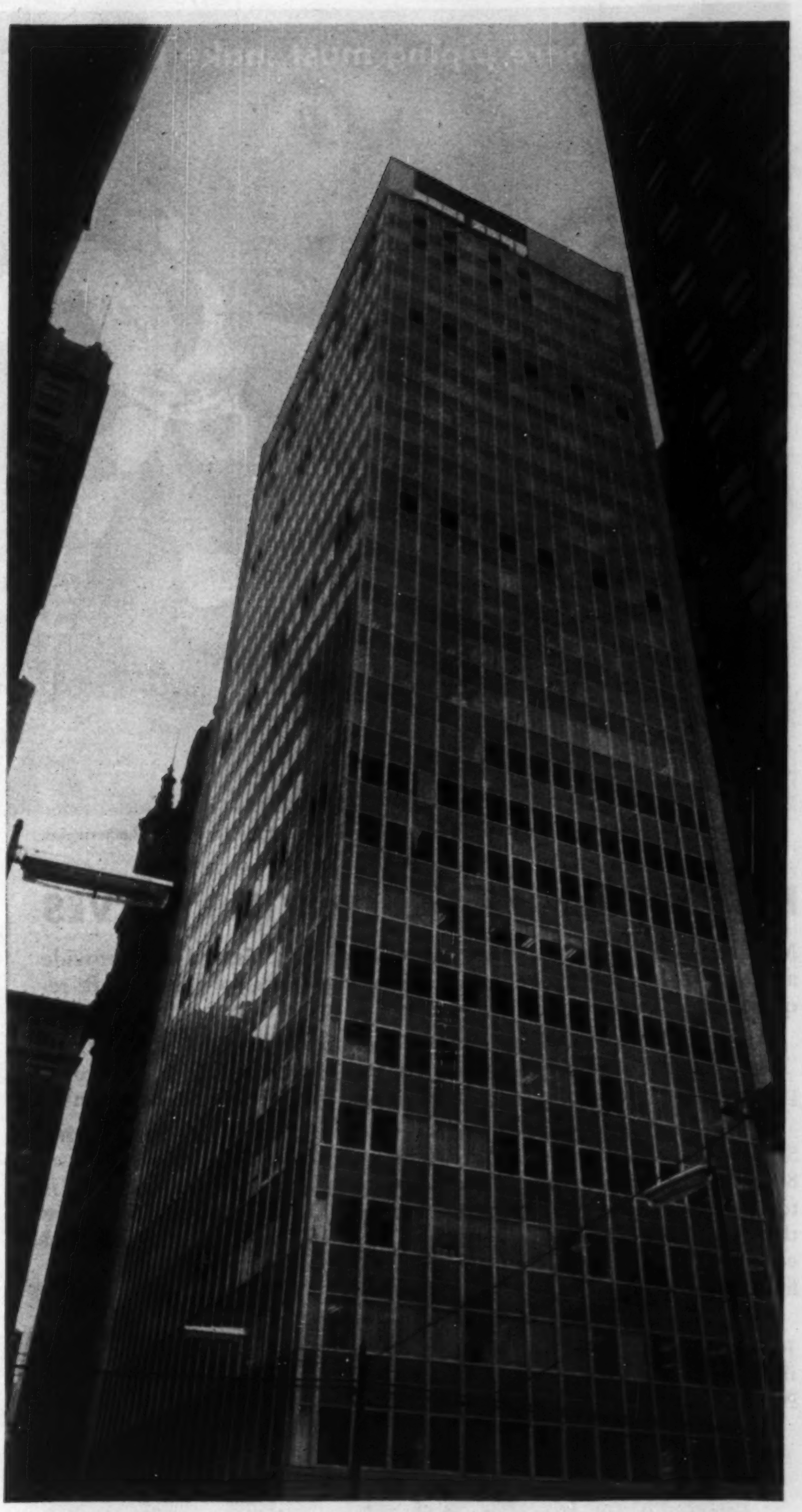
This graceful new structure is the Adolphus Tower Building, a 30-story office building in Dallas, Texas. Originally its steel frame had been designed for riveted construction, and the two lower tiers were erected in this manner. But to speed up erection, Bethlehem High-Strength Bolts were used to join the remainder of the steel skeleton. This enabled the builder to meet the rapid erection schedule that had been set for the job.

Bethlehem High-Strength Bolts save installation time, and retain their full clamping force, thus providing permanently tight joints. They are particularly well suited for construction in hospital and school zones, as installation can be accomplished with minimum noise.

Bethlehem High-Strength Bolts are used with two hardened washers, and can be installed in holes drilled or punched originally for rivets of the same diameter. The nut is driven up to predetermined tension by a calibrated pneumatic impact wrench.

Bethlehem High-Strength Bolts are made of carbon steel in sizes to meet virtually every construction need. They are heat-treated by quenching and tempering, and meet every requirement of ASTM Specification A-325.

The nearest Bethlehem sales office will be pleased to answer your questions about the use of Bethlehem High-Strength Bolts. Call them today. Or write direct to us at Bethlehem, Pa.



30-story Adolphus Tower Building, Dallas. Owner: Dallas Hotel Co.; *Architect:* Wyatt C. Hedrick, Dallas; *General Contractor:* Henry C. Beck Company, Dallas-Atlanta.

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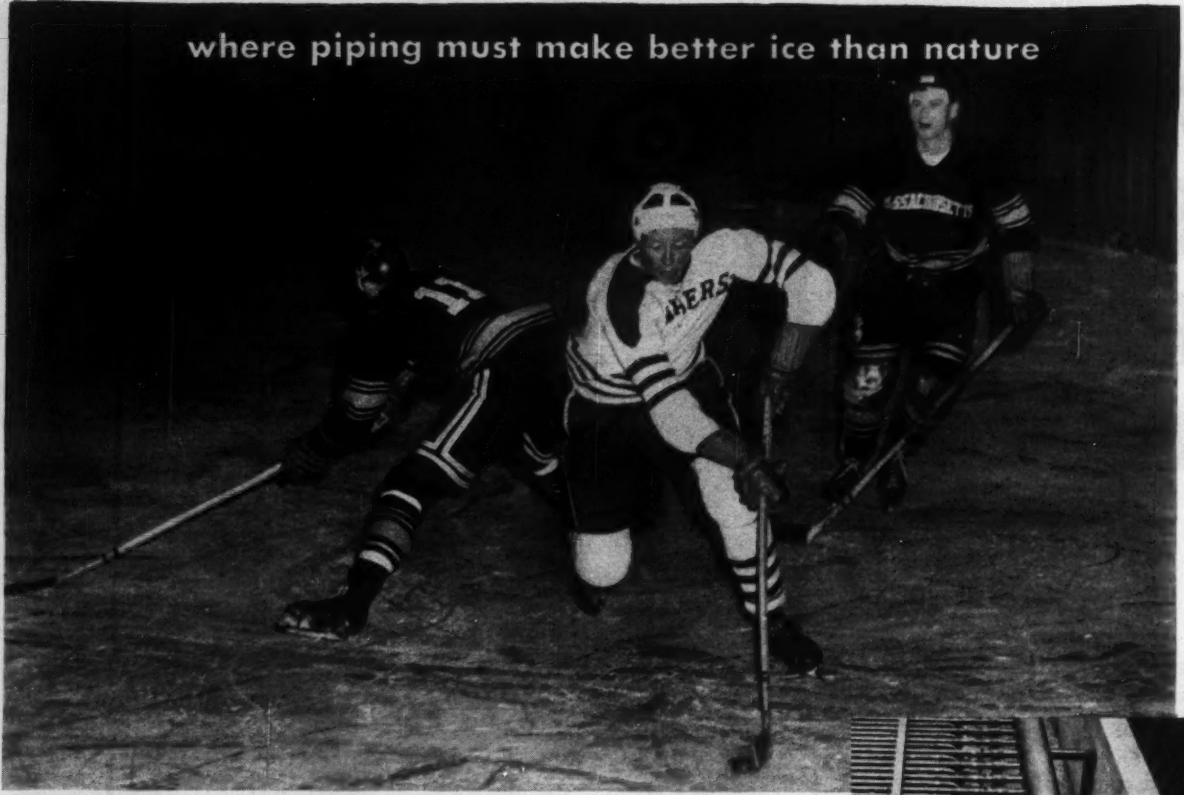
where piping must make better ice than nature



A dependable surface for the flashing speed of hockey at the Jarvis-built Amherst rink

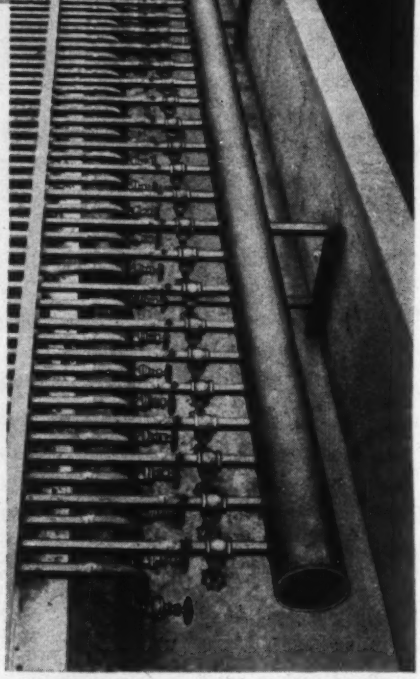
Rink builders rely on JENKINS VALVES

Modern skating rinks at sports arenas, colleges, schools, and clubs provide a hard, flawless surface on demand. Making better ice than nature requires critical valve control of hundreds of separate loops under the ice.

Arrested flow of the brine in even one loop could cause a dangerous "soft" channel across the surface. At any one of hundreds of critical points, faulty valve operation could easily shut down an entire rink.

Jarvis Engineering Co. of Boston, who built the Harvard, Amherst, St. Paul's, and many other fine rinks, have chosen Jenkins Valves for over 80 miles of piping involved. They know that the only true economy is to install the best valves that money can buy. Other rink specialists share their confidence in the demonstrated *extra measure* of efficiency and economy provided by Jenkins Valves, along with the leaders in every field of construction.

Despite this extra value, *you pay no more* for Jenkins Valves. Let the Jenkins Diamond be your guide to valve dependability, for all new installations, for all replacements. Jenkins Bros., 100 Park Ave., New York 17.



The JENKINS VALVES controlling each loop from the brine header in the St. Paul's School rink at Concord, N. H., are Fig. 1273 Bronze Gates with socket ends for silver brazing. These and other Jenkins Valves on lines to compressors, condensers, and pumps assure the critical control essential to efficient rink operation.

JENKINS
LOOK FOR THE JENKINS DIAMOND
VALVES
SINCE 1864
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Jenkins Bros

ENGINEERING NEWS-RECORD

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Back issues of ENGINEERING NEWS-RECORD *are generally available for the previous six months. Price 35¢ each copy except Annual Cost Issue. Semi-annual indexes will be sent on request.* ENGINEERING NEWS-RECORD *is also indexed in Industrial Arts Index and Engineering Index.*

THE CONSTRUCTION WEEK

LABOR AND LEGISLATURES—Organized labor, which has gone to the bargaining table with notable success to win higher wages, shorter hours and pension plans, this year turned its guns on new targets. The state legislatures—most of which met this year—became the new battlefields for bargaining. The targets: more liberal unemployment benefits, more generous workmen's compensation laws, union security. In some cases, union activity in the state houses resulted in clear-cut victories. In other cases, pro-labor legislation was easily defeated. And, in still others, particularly on the highly controversial issue of the so-called "right-to-work" laws, which ban the union shop, the fight resulted in a stand-off. To see just how extensively labor went to the legislatures, and why, ENR this week checked the recently adjourned sessions and totaled the score. For the results see page 17.

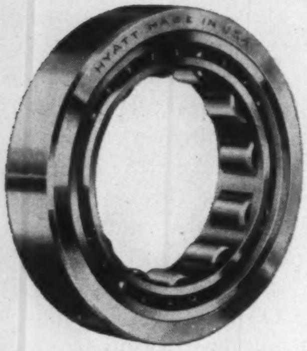
BIGGER BOOM COMING—While labor has been chalking up some impressive gains, contractors also have done well in the midst of the biggest construction boom on record. This week, government experts came up with a startling prediction that contractors will do even better: Instead of a drop-off in construction next year, the boom will get bigger. For a peek into the government crystal ball see page 20.

MORE ALUMINUM—While steel and cement continue short (sections of the Kentucky Turnpike may be held up because of the cement shortage), contractors will get some help from at least one metal that is finding more uses in the industry. After more than two years of negotiations with the federal government, Harvey Machine Co. this week took the plunge, agreed to become a primary producer of aluminum. For a quick look at Harvey's construction schedule, see page 21.

POSTAGE STAMP AIRFIELDS—Some call them "whirlygigs." To others, they're choppers. And, to the more conservative, they're helicopters. But regardless of name—or nickname—this comparatively young mechanical bird has created some real problems for engineers who must design "postage stamp airfields" for their abrupt landings and takeoffs Design criteria for such fields—heliports—have been scarce. But now, partly because of a controversy between the bi-state Port of New York Authority and the City of New York, engineers have been given a look at site and loading requirements that are likely to govern heliport design criteria for the next 10 years (see page 22).

HYATTS
HELP MAKE
GIANT D9 CAT
LIGHT-FOOTED

Caterpillar utilizes Hy-Loads in transmission and final drive of new D9, world's biggest crawler tractor



In announcing this 28-ton addition to its famous line, Caterpillar Tractor says it was designed to be a "*light-footed giant, with every part aimed at the kind of service which is too tough and too rugged for other tractors.*" No wonder we're proud that HYATTS were selected to shoulder so much of the shock-load in the D9's final drive and transmission!

When you realize that the new turbocharged engine in this tractor develops *230 drawbar horsepower*, you know what brutal punishment those bearings must bear. But Caterpillar knows, too, from long experience, that HYATTS can handle it and *keep coming back for more.*

Aren't these the kind of bearings you want on *your* equipment?

HYATT ROLLER BEARINGS

STRAIGHT ⊂⊃ BARREL ⊂⊃ TAPER ⊂⊃

HYATT BEARINGS DIVISION • GENERAL MOTORS CORPORATION • HARRISON, NEW JERSEY

WASHINGTON OBSERVER

Administration's tightening of mortgage terms won't hit housing starts for several months. This is what you should remember when you look at the latest figures:

August starts bounded back to an annual rate of 1,300,000 as indicated by surveys of local builders plans.

The dip in starts during July turns out to be an "accident"—one of those temporary declines that really run counter to the trend. Starts were at at the annual rate of 1,200,000.

July's decline coincided with the publicity over tighter terms, which made for some confusion about cause and effect.

It may be the end of the year before starts will be affected. Reason is that nearly half a million applications were in to VA and FHA when the June 30 tightening was applied. These are not subject to the minimum of 2% down-payment for veterans, 7% under FHA; or the shortening of mortgage maturities from the 30-year maximum to 25 years.

•

What the federal government offers in aid for urban renewal is now available in a booklet published by the Housing and Home Finance Agency. Write for "The Workable Program—What It Is," Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. Copies of the 10-page pamphlet sell for 10 cents each, $7.50 per hundred.

•

Government is moving fast on planning loans to flood damaged towns. The Administration is tapping funds created by the housing law to help out the hurricane damaged communities.

Already, East Stroudsburg and Scranton, Pa., have gotten advances to prepare plans to rebuild public works, and slum areas to be rebuilt under the urban renewal program. Loans are interest-free.

•

The August flood damage figures are now more firm than the first estimates.

Industry was hit for about $175 million, and about half of that was in Connecticut. The biggest sufferers were copper and brass mill plants. Silt and debris are still being dug out in the New England area, but the Commerce Dept. which made the damage report, says a lot of the plants that earlier had reported complete destruction, now find they can rebuild and recondition.

The damage to highways, homes and non-industrial plants was not estimated.

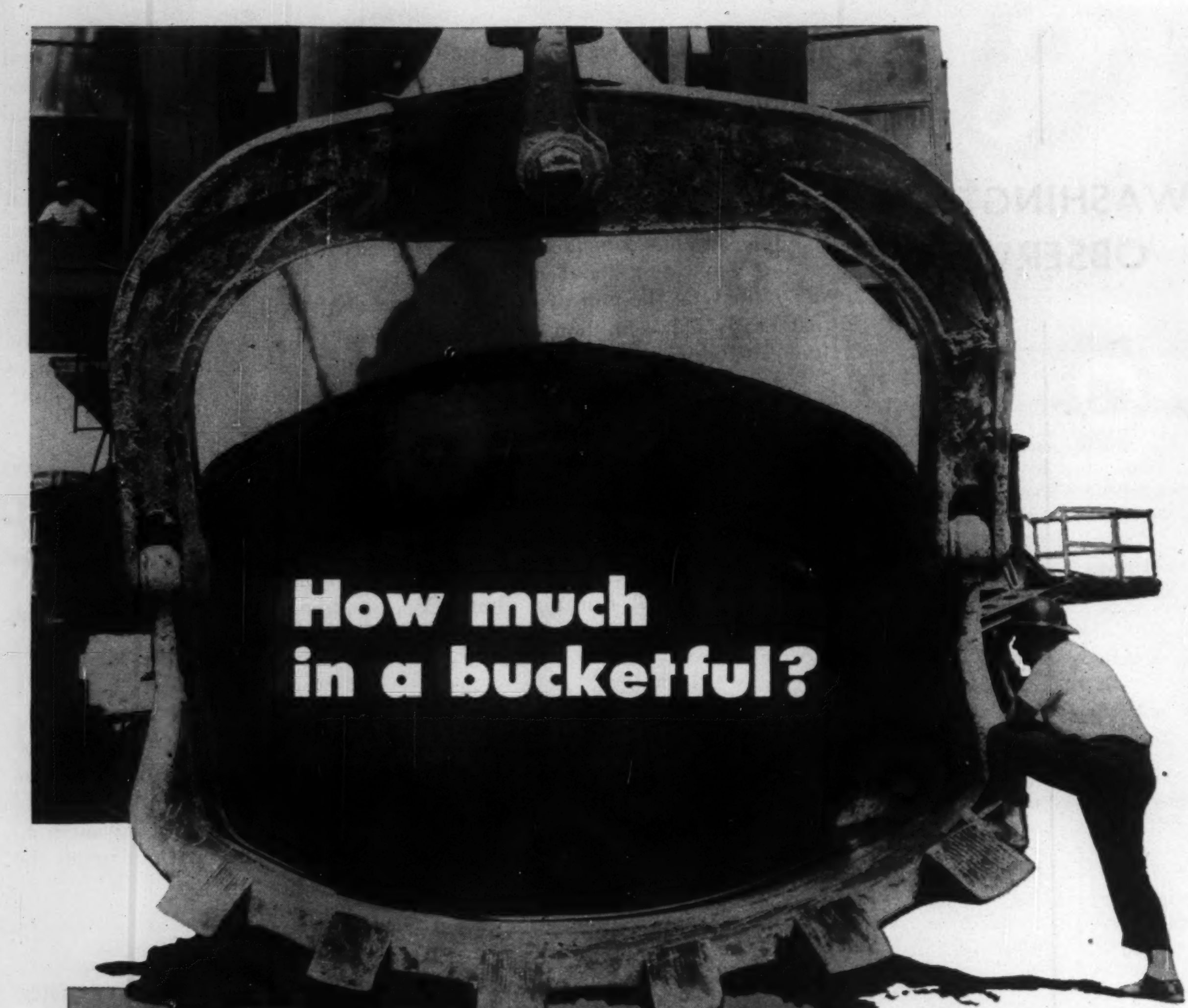
•

Home Loan Bank Board is going along on credit tightening with its clamp-down on new borrowing from the home loan banks by the savings and loan associations. (See page 50).

Savings and loan officials are complaining of this sudden curb on their activities. In recent months, as much as 20% of their business has been based on new borrowings from the home loan banks, as compared with their reinvestment of payments of principal and interest on existing mortgages.

The restriction is ironical, since the board just won its independence severing all ties with the Housing and Home Finance Agency, despite the Administration's objections. Political pressure from back home helped put this change through Congress last session, and the board now reports direct to the President.

The board has been brought into line with Administration policy. The key fact here is that all three members of the board are Eisenhower appointees; they had to conform to over-all strategy on credit, despite the anguish it brings to their member associations.



It used to hold 40 cu. yds. Now it holds 50 cu. yds. What makes the difference? Just the type of steel used to make the bucket.

Castings were used formerly—big, bulky castings. They added a lot of dead weight, but they were needed for durability.

Then along came USS "T-1" Steel. Out went castings.

Durability went up, because USS "T-1" is stronger and more resistant to abrasion. **Bucket capacity went up** because USS "T-1" can be used in thinner sections.

Costs went down. Because USS "T-1" is easy to fabricate and requires less frequent maintenance and repair.

USS "T-1" Steel is making possible similar improvements in a great variety of industrial equipment. Its high-temperature strength is being used in steel mill equipment that must operate at temperatures as high as 600° F. Its amazing low-temperature toughness is being used in construction and mining equipment that must withstand severe impact at 40° below zero F. Its high yield strength (90,000 psi. minimum) is being used to reduce the wall thickness, increase the capacity, and cut the cost of pressure vessels, air flasks, and excavating equipment. Its easy weldability—without pre- or post-heating—materially reduces the cost of fabricating heavy-duty, high-strength parts.

More and more engineers are becoming familiar with USS "T-1" steel's amazing capabilities . . . and are daily using "T-1" to improve performance and cut costs. You may be one of those who can use it to advantage. Write for complete information to United States Steel, 525 William Penn Place, Pittsburgh 30, Pennsylvania.

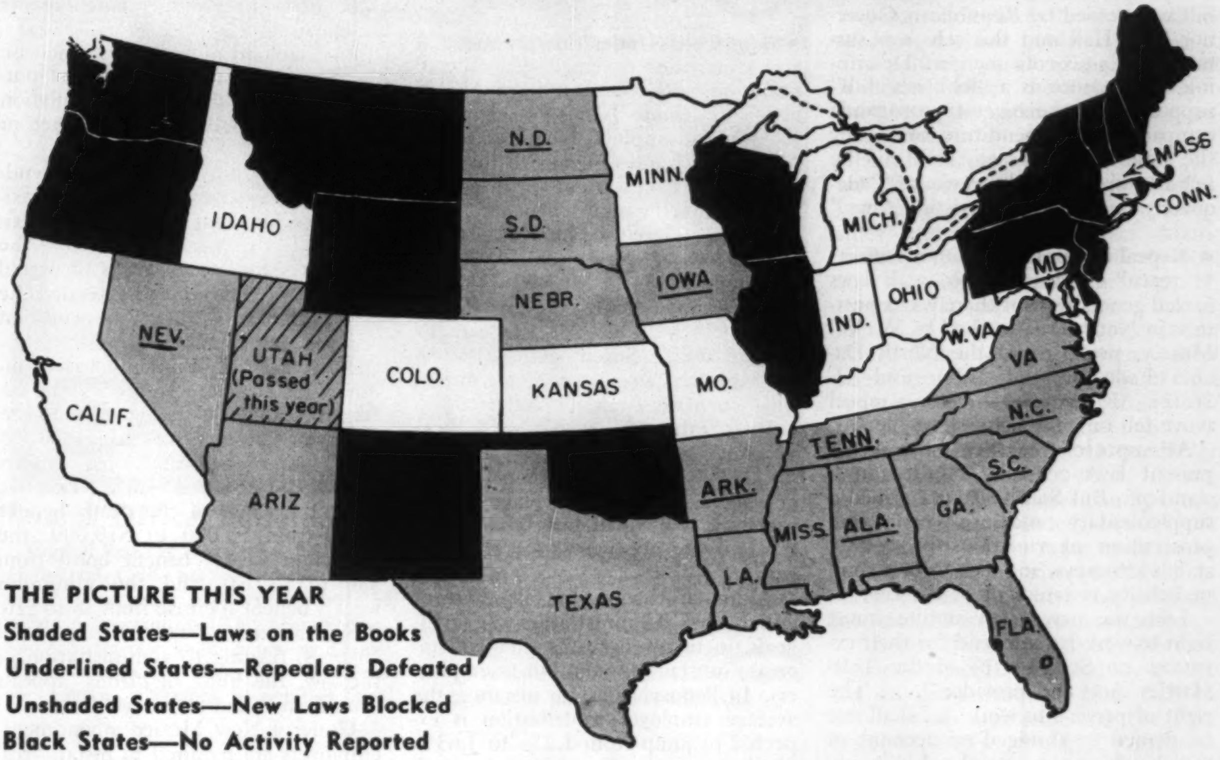
USS

UNITED STATES STEEL

. . . Labor Zeroes in on Bigger Targets

wages paid to employes of subcontractors; whether or not the subs are cov-

Right-to-Work Battle Fought in State Legislatures as . . .



THE PICTURE THIS YEAR

Shaded States—Laws on the Books

Underlined States—Repealers Defeated

Unshaded States—New Laws Blocked

Black States—No Activity Reported

Labor Zeroes in on New and Bigger Targets

C. J. Harding
Assistant Editor

The state legislative chambers across the country have become the major battlefield for organized labor in its drive for benefits and advantages for itself and its members.

That much was very clear this week, as ENR's reporters surveyed the results of legislative sessions held in all but two of the nation's states. These were some of the results of labor's massive efforts:

- On the matter of restrictions on union activities—in particular, the so-called "right-to-work" laws—the result was no better than a draw. Only one state passed a new "right-to-work" law, 13 others failed. But none of the existing 17 state statues was repealed or substantially amended.
- On matters affecting unemployment insurance, compensation and minimum wages, labor scored at least a qualified victory, gaining increases and more liberal interpretations all along the line.

Some idea of how intense was the bombardment that labor aimed at state lawmakers can be drawn from the U. S. Chamber of Commerce's comment that "1955 may well be marked . . . as the year labor unions . . . attempted to pin the union label on the dome of each state capitol."

Labor leaders themselves weren't happy: The AFL views the results as "spotty" and "disappointing," although it is claiming a partial victory in stopping most right-to-work legislation.

It is clear the fight will be resumed at every opportunity. Labor's League for Political Education, for the second time in its history, put on a fund-raising campaign in a non-election year; in Ohio, for one, the CIO is planning to put its initiative petition—calling for increased unemployment benefits—before the voters next month. In Maryland, the Associated Builders and Contractors went on record as "vigorously opposed" to current efforts to get the state's unemployment insurance law amended to take account of any guaranteed annual wage plans. And movements are reported in Kentucky and California looking to right-to-work legislation next year.

Specifically, here was the scorecard ENR's correspondents turned in on the various legislative moves:

Right-to-Work Laws

One of the biggest points of contention between management and labor in recent years has been the emergence of so-called "right-to-work" laws, which, in effect, bar the union shop and leave to each worker the decision of whether or not to join a labor union.

When the 1955 legislative session opened, right-to-work laws were in effect in 17 states, either by statute or constitutional amendment. During the year, similar legislation was introduced in 14 additional states. All failed except one—in Utah.

For the most part, the bills were killed in committee. In Maryland, where the union shop problem has frequently plunged the construction industry into costly disputes, the issue drew the largest public hearing of the session. Proponents of the measure

. . . Labor Zeroes in on Bigger Targets

tried to override the committee's adverse action, but were defeated on a voice vote.

In Kansas, this controversial issue created the greatest legislative furor of the year. Passed by both houses, the bill was vetoed by Republican Governor Fred Hall and the veto was sustained by a six-vote margin. Describing the measure as a "lobbyists' bill" supported by the biggest propaganda campaign and expenditure of money the state had ever seen, Hall said he felt an employe's right to work is "adequately protected by existing laws."

- **Repeal attempts fail**—Labor's efforts to repeal existing right-to-work laws fizzled generally. But there was a near-miss in North Dakota. Led by W. W. Murrey, president of the North Dakota Federation of Labor and H. Seavey, AFL regional director, a repeal move fell only six votes short.

Attempts to strengthen—or weaken—present laws generally resulted in a stand-off. But South Dakota passed a supplementary measure permitting prosecution of violations by county state's attorneys, and Texas got a comprehensive restatement of the law.

Like the new Utah statute, most right-to-work laws depend for their existence on Sec. 14 (b) of the Taft-Hartley Act, and provide: ". . . The right of persons to work . . . shall not be denied or abridged on account of membership or nonmembership in any labor union. . . ." These right-to-work laws prohibit union-shop provisions in labor contracts; and prohibit strikes or other conduct aimed at circumventing the law.

Collateral efforts to kill Sec. 14 (b) have failed this year on the federal level; but the issue remains a vital one in the state arena.

Unemployment Insurance

As much interest, and almost as much controversy, was generated by attempts to liberalize unemployment insurance benefits.

Although in most cases, the momentous developments in guaranteed annual wage plans occurred too late in the year to affect 1955 legislative action, the lawmakers had enough spurs to assure a lively interest.

The Republican Administration, at the national level, had been urging the states for several months to liberalize unemployment benefits and had recommended jobless benefits equal to half an earner's regular pay. The AFL had set the goal that would assure workers of unemployment benefits not less than 50% of their weekly wages. And, Congress, by a 1954 amendment to the Federal Unemployment Tax Act, effective Jan. 1, 1956, had made it extravagantly expensive for employers to remain in a state where unemployment insurance doesn't cover employers with at least four workers.

- **The score**—Under this pressure, 24 states increased coverage—generally to employers with four or more employes, although Rhode Island broadened it to cover one employe, New York (after January '57) and Oregon, to two employes; and Connecticut, to three.

Maximum weekly benefits were boosted in 32 states. They now range from a low of $24 a week in Virginia to a high of $54 in Michigan. Under Utah's amendment, the maximum after 1956 will be half the earner's average wage. Seven states also extended the period of time during which benefits could be collected.

It is estimated that under these amendments only 70% of covered workers are assured a maximum benefit of $30, and that the average jobless paycheck will equal only about one-third of the average worker's regular pay.

Although the results fall short of either the Administration or AFL goals, in many instances they will increase substantially the bill to employers. In Pennsylvania, for instance, the average employer contribution is expected to jump from 1.2% to 1.63% of the payroll. (Employers have already paid about $23 billion in state and federal unemployment taxes since the program was started 20 years ago, it is estimated.)

- **Other changes**—A host of other 1955 amendments in the field of unemployment insurance covered a variety of fields ranging from claimants' qualifications to employers' tax rates.

For example:

- Rhode Island reduced the waiting period for strikers from eight to six weeks, while Texas disqualified workers idled by a labor dispute in a feeder plant operated by the same employer.
- Washington, Oregon and California raised the minimum on the amount of wages a worker must earn in a given period in order to qualify for unemployment benefits.
- Delaware, Rhode Island and Oregon raised from $3,000 to $3,600 the tax base on employers' payroll contributions.
- Oregon increased the maximum payroll deduction from 2.7% to 3%, thus increasing the tax burden on an estimated 2,058 contractors.
- Delaware made general contractors financially liable for taxes due on wages paid to employes of subcontractors, whether or not the subs are covered employes in their own right.

Workmen's Compensation

More than half of the states considered changes in existing workmen's compensation laws and in most of these areas, the proposed amendments were passed.

Predominant motive was to increase the benefits to make up for the purchasing power lost through inflation since the original laws were enacted or last amended.

As a result, the bulk of the amendments increased minimum and maximum weekly benefits, boosted maximum death benefits, raised the allowances for various types of partial and total disabilities, and extended the list of injuries for which compensation is paid.

As in the case of unemployment insurance, the amendments will be reflected in higher costs to the employer. In North Carolina, for example, workmen's compensation rates for contractors were increased 3.6%, effective Sept. 1 because of the death benefit boost from $8,000 to $10,000, the maximum weekly benefit boost from $30 to $32.50, and the minimum weekly benefit increase from $8 to $10.

Several states enacted procedural changes, relating to administration of the law, the filing of claims, appeals from awards and attorney's fees.

Under a New Mexico amendment, employers are required to install "reasonable safety devices." In Oregon, covered employers are now required to withhold two cents a day from wages, part of which will be used to increase pension payments to widows. North Carolina extended coverage to executive officers. And in Connecticut, Christian Science treatment of injuries was recognized as legally acceptable.

Prevailing Wages

Of direct interest to contractors and the building trades were bills to establish prevailing wages for public works projects. Among those passed this year:

- An Illinois law requiring that "all employment contracts on toll-road construction conform with prevailing wages of laborers, mechanics and other workmen employed under contracts for public works."
- A Montana amendment to the 1947 law defining the "standard prevailing rate of wages" to be those established by collective bargaining in the county where the project lies, and requiring preference be given to bona fide residents of the state.
- A Connecticut bill requiring payment of prevailing wages, as deter-

Government Says Outlook Is Bright

Round Office Building Nears Completion

Capitol Records' round office building in Hollywood, Calif., has reached the 11th of its 13 floors with completion scheduled within a few months. The $2-million reinforced concrete building has an 82x180 ft rectangular first floor with 90-ft dia upper floors. According to architect Welton Becket and Associates, Los Angeles, the circular design reduces perimeter wall construction 13 to 20% over square or rectangular shapes enclosing the same 6,300 sq ft space. Structural engineering is by Murray Erick Associates, Los Angeles. C. L. Peck is the general contractor.

mined by the State Labor Commissioner on state, city or town non-federally aided projects.

Prevailing wage measures were defeated in four states: Wyoming, Missouri, Texas and Maryland. Governor Donnelly of Missouri based his veto on the increased costs, administrative problems and delays that would result. The Maryland defeat is considered a trade for the right-to-work defeat, in order to placate both labor and management.

Minimum wage bills were introduced and passed in many states. They established minimums considerably below that of the new federal law.

Labor Relations

Relating more directly to the general field of labor relations were a variety of bills that for the most part failed to clarify or fill in the critical gaps not now reached by the Taft-Hartley Act.

One of the most significant measures is Kansas' new labor relations law, requested by Governor Hall in both his legislative and right-to-work veto messages. It prohibits jurisdictional strikes, secondary boycotts and closed-shop agreements; allows union-shop contracts on a union majority vote; sets up a code of fair labor practices; and requires secret balloting on collective bargaining and strike decisions.

Efforts to pass somewhat similar bills were defeated in Michigan, Vermont and Maine. The "piece meal" form of legislation was generally more successful. Here are a few examples:

• Connecticut prohibited a struck employer from advertising for help unless he states he is strikebound. It also speeded up the process of taking temporary restraining orders in labor disputes to the Supreme Court.

• Maine revised its law governing the State Board of Arbitration and Conciliation, and Rhode Island enacted a law to enforce arbitration clauses in labor contracts.

• Minnesota amended its union stability law, providing for legal service on union officials instead of any member.

• **Other highlights**—Most of the 1955 legislative hoppers were heavy with related labor bills as broad in scope as the field itself.

Attracting national interest were politically explosive attempts to ban political contributions from labor unions—measures which were successfully passed in New Hampshire and Wisconsin but defeated in Michigan. Known as the "Catlin Bill," Wisconsin's law, signed by Republican Governor Kohler, subjects to stringent penalties and labor organization making any contribution, in cash or in kind, for any political purpose to any political party or candidate—but it doesn't affect the right of union members to make individual contributions.

In the safety field, Texas defeated a bill to establish an industrial safety commission to make reasonable safety rules and regulations, but Maine passed a measure specifically directed at the construction industry. It established an eight-man board, known as the Board of Construction Safety Rules and Regulations. Representing various segments of the industry, the board is primarily a rule-making agency. Inspections will be conducted by the Department of Labor and Industry, which is empowered to halt work on projects where rules are violated.

Scattered efforts were undertaken to extend or broaden the field of social legislation, where the principal interest was in sickness insurance.

Rhode Island increased its cash sickness benefits, financed by a 1% tax on gross earnings, from $25 to $30 a week and increased the base from $3,000 to $3,600. California boosted its weekly benefits from $35 to $40. In Massachusetts, a labor-backed bill to establish a compulsory sickness insurance plan was defeated.

Administration of union welfare funds continued to attract attention and Washington became the first state to put welfare funds under state regulations. A similar measure in New York was vetoed by Governor Harriman as inadequate and premature. An interim study of the problem was ordered in Massachusetts.

And typical of the interest of opposing forces were a number of nationally minor—but locally significant—bills for such purposes as these:

• Requiring labor organizations to obtain a license at a substantial fee before entering certain Alabama counties for the purpose of organizing.

• Requiring out-of-state contractors to post wage bonds—killed in Wyoming.

• Establishing a commission to study legislation needed to regulate the plumbing industry—passed in Illinois.

• Authorizing towns to enter into colllective bargaining agreements—passed in New Hampshire.

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to be put in place on going projects

than 177,000 cu yd of concrete were

Government Says Outlook Is Bright . . .

Construction Put-in-Place May Set New Record

Construction spending next year should top record-breaking 1955 by at least 4 to 5%. That was the outlook last week as government experts in the Commerce and Labor Departments began preliminary studies leading up to their annual forecast, to come out in November.

With nearly three-quarters of the current year gone, a conservative projection of construction activity for 1956 shows close to $45 billion of expenditures during the 12 months starting next Jan. 1. That amount of spending on new construction would be nearly $1.9 billion greater than the total indicated by adjusted figures for this year (see table).

Increases are expected next year in construction spending for commercial buildings, public utilities, new private industrial facilities, religious structures, military installations, highways and other local public works. This will more than compensate for anticipated declines in new homes stated and in public industrial projects of the Atomic Energy Commission.

Preliminary estimates of the number of new dwelling units to be started next year range generally from 1.1 million to 1.2 million, with an increase in the average cost per unit to about $12,000. There will be some carryover of construction spending into next year on houses started between now and Dec. 31, but this delayed spending will be small in comparison with the total amount expended next year on new homes. If the government maintains its anti-inflationary controls on credit and mortgage lending through winter and spring, construction expenditures on new houses next year could be less than the $14 billion estimated here.

Additions and alterations, however, should continue to rise in line with increases in spendable income in the hands of homeowners. To permit a valid projection for 1956, expenditures in this category during 1955 have been estimated at $2.7 billion on the basis of the Census Bureau's five-month survey of homeowner spending (ENR Dec. 23, p. 47). The Commerce and Labor Departments may be expected to consider a similar adjustment when they prepare the next construction spending forecast. Up to now, the government experts have not determined what more accurate figure to substitute for the $1.2-billion estimate used in both the preliminary and the revised forecasts for 1955 construction activity.

Apart from homebuilding, forecasts for other categories stand on firmer ground. In all types of heavier construction, including larger buildings, there will be a substantial carryover of uncompleted work to be done next year on contracts awarded during 1955 or even earlier. For these classifications, expenditures in 1956 on going projects represent as much as 30 to 50% of the total spending forecast.

Contract awards have been running at high levels in those types of work for which spending increases are indicated in 1956. The rate of awards in those categories is expected to continue.

Commercial and private industrial contract awards reported by ENR are up 30 to 45% above the figures for the same period last year. Water and sewer awards likewise are 8% over the 1955 total for the first eight and one-half months, while highway contracts are running 17% ahead of a year ago.

Contract awards for all classes of heavy construction reported by ENR show a 31% gain over last year, with total volume accelerating in September after a temporary slowdown in August. These indicators point to a heavy backlog of continuing projects under construction at the beginning of 1956.

This backlog puts a solid footing under preliminary forecasts of 1956 construction spending. In the heavier categories, carryover work that remains

Bigger Boom Coming: 4% Rise Seen for '56

	1955 Estimate	1956 Outlook	PC Change
Residential			
Private: New dwelling units	$14,600	$14,000	−4
Additions and alterations	2,700	2,800	+4
Nonhousekeeping (hotels, dorms, etc.)	325	350	+8
Private residential total	17,625	17,150	−3
Public Housing	250	300	+20
	17,875	**17,450**	**−2**
Industrial			
Private	2,200	2,600	+18
Public	825	450	−45
	3,025	**3,050**	+1
Educational			
Private	500	500	0
Public	2,550	2,600	+2
	3,050	**3,100**	+2
Hospital and Institutional			
Private	370	400	+8
Public	325	300	−8
	695	**700**	**0**
Commercial			
Office buildings and warehouses	1,075	1,185	+10
Stores, restaurants and garages	1,800	2,350	+31
	2,875	**3,535**	**+23**
Religious	**750**	**900**	**+20**
Social and recreational	**265**	**300**	**+12**
Other private non-residential	**325**	**350**	**+8**
Other public non-residential	**760**	**800**	**+5**
Farm	**1,400**	**1,300**	**−7**
Public utility	**4,500**	**5,015**	**+11**
Highways	**4,000**	**4,300**	**+8**
Military	**1,250**	**1,500**	**+20**
Sewer and water	**1,100**	**1,250**	**+14**
Flood control, reclamation, rivers, etc.	**600**	**625**	**+4**
Public services, including airports	**300**	**400**	**+33**
All other private	**175**	**200**	**+14**
All other public	**175**	**200**	**+14**
TOTAL PRIVATE	**$30,985**	**$32,250**	**+4**
TOTAL PUBLIC	**$12,135**	**$12,725**	**+5**
GRAND TOTAL	**$43,120**	**$44,975**	**+4**

to be put in place on going projects next year accounts for sizable portions of the estimated construction expenditures.

As an example, the backlog for all types of commercial building averages more than 30% of the construction spending forecast for that class of construction in 1956. The carryover is greater for the heavier projects in the first component (warehouses and office buildings), but is lower for the lighter and more quickly completed jobs in the second category (stores, restaurants and garages).

Similarly, backlogs carried over into next year account for roughly 50% of the expenditures forecast for hospitals, schools, religious construction, and private industrial building. In sewer and water work, the carryover is estimated to produce about 40% of the forecast expenditure.

A small decrease is forecast in farm construction, indicating an expected drop resulting from the decline in farm income. Actually, the government's figures for farm construction stand on even shakier ground than the estimates for homeowner additions and alterations.

Government estimates for these items and for some others cannot be firmly based until Congress acts on repeated requests for more money to gather essential data. Until then, the farm construction figure has to be accepted as an educated guess rather than a sound estimate.

Most of the Commerce-Labor estimates for 1955 construction, used here as a basis for the ENR Washington look-ahead to 1956, rest on stronger foundations, however. Spending by federal construction agencies, for example, is well mapped out in advance. And construction expenditures of privately owned public utilities also are firmly scheduled for a year or more ahead.

Other classes of private and state or local public construction can be pretty accurately estimated from the trend of reported contract awards and announced financing or expansion plans. Even for home building, plans of speculative builders help share the estimates of future activity.

Dam Completed

Columbus water supply to be more than doubled by Hoover Memorial Dam

Dedication Sept. 23 of the Hoover Memorial Dam at Columbus, Ohio, will signal the closing of water gates to permit formation of a 27,000,000,000 gallon reservoir from which the city will draw its domestic and industrial water (ENR Aug. 13, 1953, p. 49).

J. A. Jones Construction Co., Charlotte, N. C., turned the dam over to the city on Aug. 15, and immediately increased activity on the $5.5-million filtration plant and a $2-million program of interceptor mains that are portions of the $20-million waterworks improvements plan, slated for completion before 1960.

The date of the dam dedication was selected by Mayor M. E. Sensenbrenner to coincide with the state convention of the Ohio Section of the American Waterworks Assn. Completion of the project was delayed because of land acquisition problems and difficulty in relocating some roads.

Latest project costs for the reservoir are in excess of $24 million. In addition to the dam itself, this cost figure includes land acquisition costs, relocation of eight roads, a new bridge, three large pipelines, a 60-mgd filtration plant and the cost of adding 8-ft-high crest gates to the top of the dam, an undertaking not included in the original contract.

• **Earth-fill dam**—The dam itself is a compacted earth-fill embankment with concrete gravity uncontrolled section spillway, 2,525 ft long and 650 ft at the base. The lake formed will extend 8½ mi up Big Walnut Creek and will range in depth up to 80 ft.

The contractor moved nearly 1,000,000 cu yd of earth and stone and placed almost 900,000 cu yd of concrete, protection stone and compacted earth fill in the dam. More than 177,000 cu yd of concrete were cast in place.

City officials estimate the new reservoir will contain nearly 3½ times as much water as the combined storage of Griggs and O'Shaughnessy Reservoirs on the Scioto River, upon which Columbus now depends for its water supply. Hoover Dam Reservoir will supply as much as 63 mgd. Present daily usage is about 53 mgd.

Ben K. Bare was engineer in charge for Burgess & Niple, Columbus consulting engineers, and E. F. Biggs was project engineer for the J. A. Jones Company. Burgess & Niple also had Tahlman Crum on the job as their project engineer and Robert Tippett as engineer in charge of bridge construction and roads.

Metals Expansion

Harvey Machine Company to start work quickly on primary aluminum facility

Construction will get under way immediately on a new $65-million plant to produce primary aluminum as a result of a new contract signed by the government and the Harvey Machine Co., of Torrance, Calif.

Harvey, a long-time fabricator of aluminum, has been trying to get started as the fifth producer of aluminum ingot for several years, but ran into a snag on a problem involving government policy on delivering power from The Dalles, Ore., to the proposed Harvey plant, 14 mi away.

The agreement with the government calls for construction of the power line by Harvey at a cost of more than $2 million. Power for the plant will be supplied over this line by Bonneville Power Administration.

The power line is to be completed in 18 months. The plant is scheduled to be in operation by May 1958.

• **Tax aid assured**—The Harvey Machine Co. has had a fast tax write-off certificate since 1953. The firm also has government loan guarantees, plus a guarantee that the government will purchase any aluminum that Harvey cannot sell in the open market.

In exchange, Harvey guarantees to sell two-thirds of its output to non-integrated fabricators of aluminum. The government has first call on the metal, however. In fact, Harvey's capacity of about 54,000 tons per year would go entirely to the government during the first five years of the plant's operation if the government decided to exercise its option. The contract calls for production of 270,000 tons of metal by June 1963.

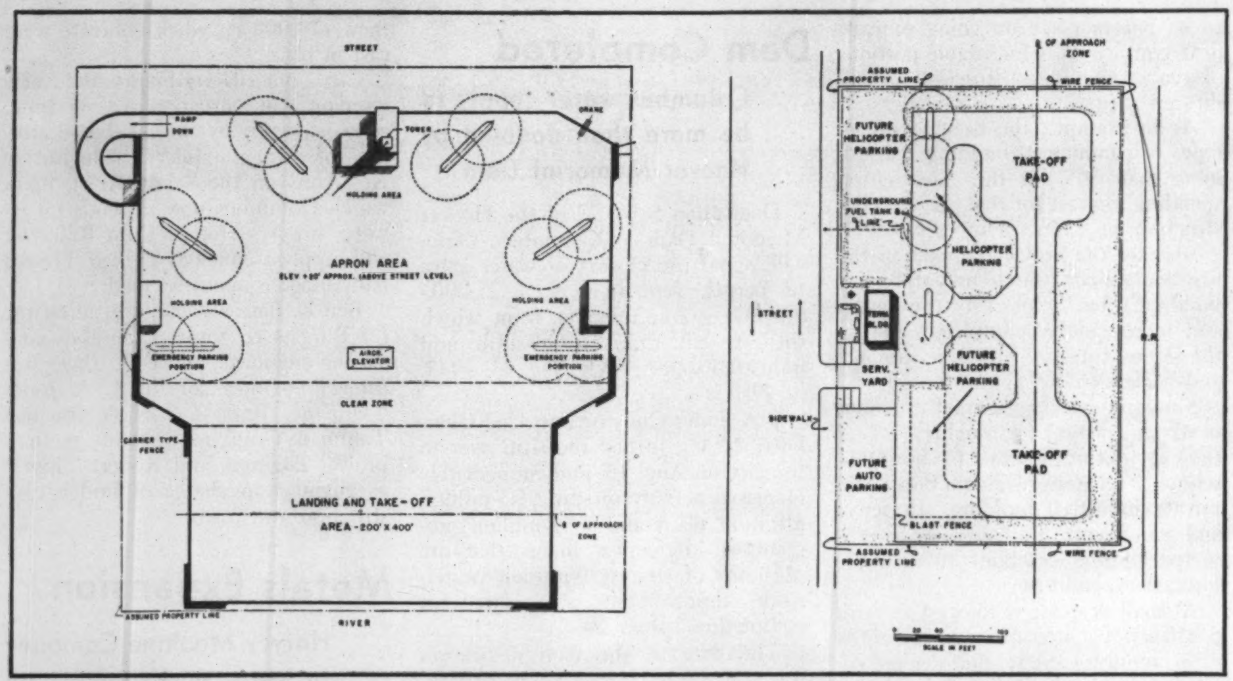
Navy Asks Bids on New "Texas Towers"

With the first of its proposed chain of "Texas Tower" radar islands now firmly anchored to the ocean bottom off Cape Cod (ENR Aug. 11, p. 24) the United States Government this week advertised for bids for constructing three more of the structures.

The towers—designed to be placed well out at sea but founded on the continental shelf on heavy steel and concrete caissons driven into the ocean floor—will house radar warning devices.

The First Naval District, in Boston, advertised for the bids, asking tenders on constructing, towing to site and "implanting in the ocean floor" three towers, each about 20 ft deep, triangular in shape and 200 ft long on a side. No cost estimate was given, but it is known that the first tower will cost in excess of $8 million.

fires; height of the facility would re- helicopter will have characteristics struction would be difficult. Water-


STREET
RAMP DOWN
TOWER
CRANE
HOLDING AREA
APRON AREA
ELEV +20' APPROX. (ABOVE STREET LEVEL)
HOLDING AREA
HOLDING AREA
EMERGENCY PARKING POSITION
AIRCR. ELEVATOR
EMERGENCY PARKING POSITION
CLEAR ZONE
CARRIER TYPE FENCE
LANDING AND TAKE-OFF
AREA - 200' X 400'
℄ OF APPROACH ZONE
ASSUMED PROPERTY LINE
RIVER
℄ OF APPROACH ZONE
ASSUMED PROPERTY LINE
WIRE FENCE
FUTURE HELICOPTER PARKING
TAKE-OFF PAD
UNDERGROUND FUEL TANK & LINE
HELICOPTER PARKING
STREET
TERM. BLDG.
SERV. YARD
FUTURE HELICOPTER PARKING
R.R.
SIDEWALK
FUTURE AUTO PARKING
TAKE-OFF PAD
BLAST FENCE
ASSUMED PROPERTY LINE
WIRE FENCE
0
20
40
100
SCALE IN FEET

PROPOSED DESIGNS FOR TWO TYPES OF HELIPORTS on a river, such as the planned landing field on the Hudson in New York (left), and a secondary field inland (right)—result from a Port of New York Authority study.

What Governs Heliport Design?

Bi-state agency, disagreeing with city on proposed project, presents new site and loading requirements

The Port of New York Authority opened a wide door for engineers and designers and for the aviation industry last week, by making public a detailed report on heliport location and design that contains facts and figures never previously assembled in this form.

The occasion was the authority's reopening of a standing battle with New York City's Department of Marine and Aviation over who should build—and where to locate—a port for helicopters in the heart of the metropolitan district.

PNYA wants to build a $50,000 temporary heliport on the shore of the Hudson River at 30th St., Manhattan. The city has held out for its own plan of building a heliport atop a multi-story freight terminal.

Backing its claims that the proposed 100x400 ft ground-level temporary heliport—which would be replaced by a $5-million permanent installation in 1960—would safely accommodate present commercial rotary-wing traffic, the authority released to the press results of its studies of heliport design, to which many aviation industry authorities had contributed. City officials had declared that the proposed temporary heliport would be "unsafe" because of proximity to an elevated highway.

Speaking in defense of the project before a group of newspaper and magazine aviation writers, Thomas M. Sullivan, chief of PNYA's Aviation Planning Division, offered the heliport study as evidence.

- **High or Low**—Comparing the city's proposal of an elevated heliport versus its own ground-level plan, PNYA set up the results of its study this way:

- Advantages of an elevated structure—if land cost is at premium, the roof-top facility is cheaper, since intervening floors can be used for other commercial purposes; helicopters could be parked on lower floors; the facility could be located in any built-up area and be easily accessible to public transportation; height would reduce problems for pilots approaching the facility.

Disadvantages would include extra cost of installing fueling facilities and means of protecting them and surrounding areas; difficult of fighting

Heliport Area Requirements

	1955	1960	1965	Ultimate
Size of landing and take-off area				
Major heliport	100x100 ft.**	200x400 ft.	200x400 ft.	200x400 ft.
Secondary heliport	100x100 ft.**	150x300 ft.	150x400 ft.	150x400 ft.
Number of parking positions				
Major heliport*	4	4	4	5
Parking area				
Major heliport				
(a) if helicopters are positioned mechanically.		85x135 ft.	85x135 ft.	85x135 ft.
(b) if helicopters are taxied	80x125 ft.	100x160 ft.	100x160 ft.	100x160 ft.
Secondary heliport helicopters taxied	60x60 ft.	60x110 ft.	60x110 ft.	85x135 ft.

* In addition, space should be provided for one disabled aircraft, or means should be provided for removing it from the landing area.

** If heliport elevation is such that loss of ground cushion occurs on take-off immediately after leaving heliport, size must be increased sufficiently to assure that operations can be safely conducted in compliance with the height-velocity diagrams for the helicopters using the heliport.

fires; height of the facility would reduce the number of days that it would be usable for flying, since the height would reduce the available "ceiling" occurring between the deck and the cloud layers.

- For ground-level structures, advantages would include lower initial construction costs; lower operating costs (expensive elevators or moving stairways could be eliminated, for instance); more available flying days; easier handling of emergencies resulting from fueling or flight operations.

- **Design criteria**—Having stated its case for the ground-level heliport, PNYA went on to matters of deep interest to the construction fraternity. On design, the report said:

To understand design criteria, it is necessary first to realize the objectives of a commercial heliport. With the objective—carrying large loads—in mind, it becomes apparent that the helicopter cannot make use of near-vertical takeoff and landing, must rather use a relatively flat approach and takeoff angle.

In fact, in commercial use, the helicopter will have characteristics similar to conventional fixed-wing aircraft, though approach and takeoff angles will be steeper and flight speeds much slower.

Considerations in site selection must include proximity to traffic generating centers and post offices; accessibility; space needed for the heliport itself; practicability of providing refueling facilities.

Next consideration is orientation. Since the helicopter derives lift through air flow over its rotors, wind velocity affects performance. The operating area, thus, should be designed to permit operation into the wind, to minimize cross-wind operation, and to eliminate need for downwind operation. This requires analysis of weather records to determine direction of the prevailing winds.

For helicopter approaches, the report recommends a minimum glide slope of 8:1. Approach zones should be clear from at least two directions, 180 deg apart.

Since getting zoning ordinances changed is a lengthy and difficult process, a better answer would be the choice of property where future obstruction would be difficult. Waterfront property is a prime example. An alternative might be to align the approaches over open land such as parks, cemeteries, parkways, beaches and marshes. If the approach is selected over a parkway, precaution should be taken that the operations do not present a safety problem with respect to traffic on the ground.

As to landing and takeoff area requirement for heliports, the report comments that this will increase as larger helicopters become available. However, important size increases probably will be negligible by 1960.

But the area to be reserved for parking the craft is a variable, and will depend on whether the aircraft is to be taxied under its own power or is to be positioned by means of some mechanical device.

In laying out a heliport, the area per aircraft should be based on dimensions of the largest two-rotor helicopter now being tested.

- **Loadings**—The structural designer should design the landing area for impact loadings, and the parking area for taxiing aircraft. PNYA recommends that 0.7 of the gross weight be used as the impact load per square foot for helicopters up to 16,000 lb gross weight. For helicopters above this weight, the impact load will be applied to an area which in square inches is equal to the ratio of the gross weight of the aircraft to 16,000 lb, multiplied by 144 sq in.

For refueling facilities, it is recommended that the systems have a capacity such that three positions can be refueled simultaneously, each at a rate of 100 gallons per minute. Fuel storage will depend on local regulations.

Rotor blast also should be allowed for. The downward blast may reach as high a velocity as 60 mph and the downdraft will extend up to three times the rotor diameter, which can be assumed at 250 ft.

Control tower facilities also must be provided.

Approach Zone Characteristics

	1955	1960	1965	Ultimate
Approach zone width at landing area				
Major heliport	200 ft.	300 ft.	300 ft.	300 ft.
Secondary heliport	200 ft.	250 ft.	250 ft.	250 ft.
Approach zone width outward from area	Width increases at 15 deg angle symmetrically on both edges to width 1000 feet and continues at 1000 feet.			
Approach zone slope				
(a) with emergency landing areas	1 to 8	1 to 8	1 to 6	1 to 4
(b) when no emergency landing areas are provided	1 to 20	1 to 8	1 to 6	1 to 4
Curved approach zone—minimum radius of turn	650 ft.	650 ft.	650 ft.	650 ft.
Approach zone transition areas	1 to 2	1 to 2	1 to 2	1 to 2

Helicopter Weights

	1955	1960	1965	Ultimate
Intercity and suburban helicopter maximum weight (pounds)	15,000	45,000	50,000	50,000
Aerocab helicopter (pounds)	15,000	20,000	25,000	25,000
Passengers per aircraft—intercity and suburban maximum	15	50	60	60
Passengers per aircraft—aerocab	15	22	27	30
Cargo capacity—intercity (pounds)	3,000	10,000	12,000	12,000

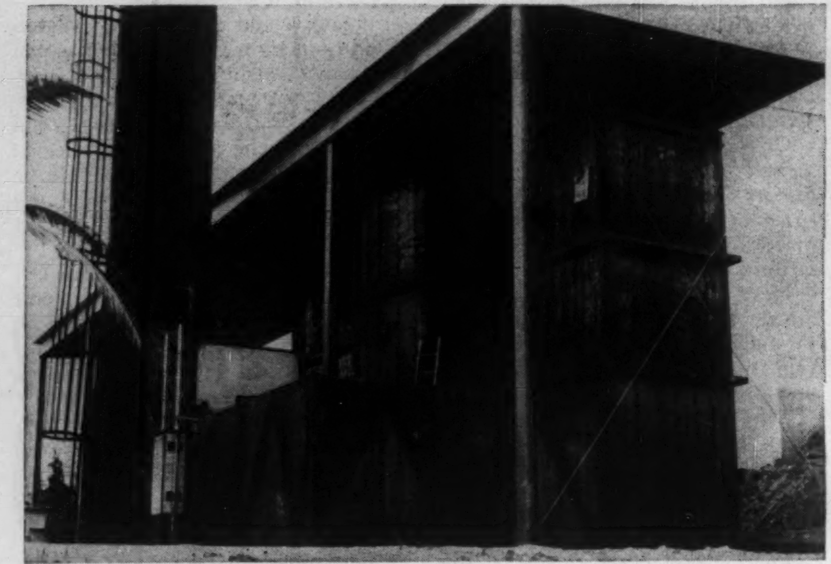
Loading on Landings

	1955	1960	1965	Ultimate
Impact loading (pounds) per main gear				
Major heliport	10,500	31,500	35,000	35,000
Secondary heliport	10,500	14,000	17,500	17,500
Maximum Tire Pressures (pounds/sq. in.)	70	100	100	100
Area (sq. in.) on which impact load to be applied				
Major heliport	144	405	450	450
Secondary heliport	144	180	225	225

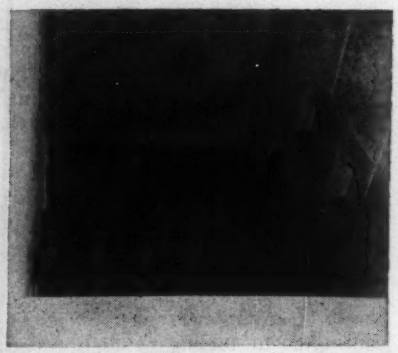
Change in Power Plans

Idaho Power Co. asked the Federal Power Commission last week for permission to speed up the construction schedule on its Snake River, Idaho, hydroelectric development. The utility also submitted revised designs calling for impervious clay cored, rockfill dams instead of the concrete-faced structures required by its license.

Construction on both the 395-ft-high Brownlee Dam and the 205-ft-high Oxbow structure will start as soon as the approval of the commisssion has been obtained.



SEMI-OUTDOOR CONSTRUCTION is used on a new rubbish incinerator at the Los Angeles County Fair Grounds. Steel shell, yet to be painted, is lined with fire-resistant plastics. Room is available for construction of duplicate unit.



FIRE GRATE has rotating arms that slowly turn and move the rubbish mass as it is burned. Arms are cooled by internal water circulation.

Incinerator Meets Strict Tests

To pass the particulate matter test, the incinerator cannot discharge more than 0.4 grains per cubic foot with gas volume adjusted to 12% CO_2. Limitation on gas volume prevents getting by the law simply by diluting the emission with great amounts of CO_2 while still emitting quantities of particulate matter. And particulate matter includes both solids and liquids—with liquids being anything condensible in the sampling trays used. Most smog control agencies test only for solids.

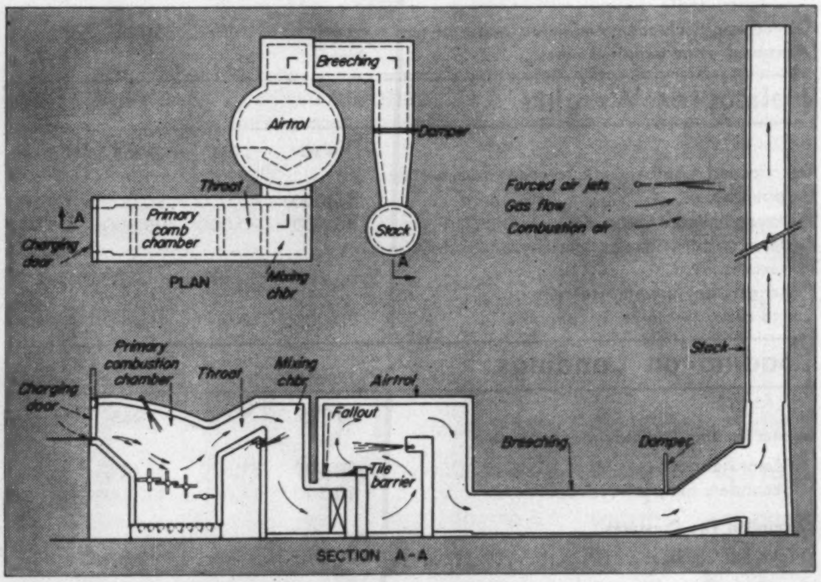
Both opacity and particulate matter tests must be passed throughout the operation of the incinerator. But instead of checking round-the-clock, LACAPCD engineers make a thorough check at two times—during full normal burning and during the burn-down period (after charging is stopped and material is allowed to burn itself out). The Pomona incinerator was measured at 0.24 grains per cubic foot during the regular burning period and 0.29 grains per cubic foot during the burn down.

As the smog problem in Los Angeles becomes increasingly acute, it is probable that the LACAPCD will tighten up on the particulate matter test. Just how far they will go has not yet been indicated. Their maximum requirements may be reduced to 0.3 grains per cubic foot or even to 0.25 grains per cubic foot. Should the latter be the case, designers of the new Pomona incinerator are confident they can meet the requirement by operating more carefully.

- **Two sets of grates**—The incinerator actually has two grates. In addition to the grate formed by slowly rotating arms, there is a fixed or ash grate below where unburned material would accumulate and burn.

The top grate has four sets of arms, three of which rotate at from 8 to 20 revolutions per hour. Each succeeding set of arms is placed six inches lower so the rubbish mass is gradually moved through the grate area. The last set of arms is fixed 15 in.

RUBBISH CHARGE for smog tests was accumulated by "borrowing" from nearby cities to add to small off-season total from fair grounds. Material is classed as combustible rubbish but was water soaked for test purposes.



PATH OF TRAVEL of combustion products is shown in cross-section. Charging floor is 15½ ft above level of the unit. Combustion efficiency results from only 10% underfire air and arched roof shape of primary chamber.

below the previous set. The arms are 20 in. long and are formed of 4-in. schedule 40 black pipe. Water is continuously circulated through the grate arms by means of smaller pipes inside them. The rotating grates are placed on 2-ft 8-in. centers.

Area of the rotating grate is 8x12 ft. The reflector shape of the primary combustion chamber ceiling adds to the efficiency so the throat or hot hearth is considered by the designers to be part of the grate area. This gives a total area of just over 150 sq ft. The incinerator is charged through a charging door at one end at a rate of about 4 lb per sq ft of grate area per hour. This charging rate is considerably less than that used for many recent incinerators. The designers believe the slow rate helps control particulate matter emission; a faster rate might force too much particulate matter out of the stack.

Only 10% of the combustion air is introduced below the burning grate. Most of the necessary air is induced through ports. Additional air is by forced air jets to induce turbulence.

The first volatiles have to go the entire 17 ft length of the charging chamber before coming to the mixing chamber—the hottest part of the incinerator where most combustion takes place. Path of the gases bends downward for 17 ft through the mixing chamber. Air jets in this area help promote good burning.

After the mixing chamber the combustion gases move to the Airtrol chamber that has both horizontal and vertical baffles. First baffle is vertical causing flow to be split. This is followed by a horizontal baffle that causes the gases to roll. The baffles are so arranged that none of the gases can go straight through the chamber. Gas flow is slowed down to 4 fps to permit particles—some as fine as face powder—to fall out.

Final path for the combustion gases is through a relatively long breeching chamber to a 100-ft high stack. The breeching chamber is provided with a damper that can regulate the draft. The unit has no water spray or other air cleaning devices as none is needed for particulate matter removal. And this results in substantial operating cost reduction.

Total power required to run the installation is 6 hp. Water demand is 80 gpm including that required for grate-arm cooling and fine-spray ash quenching.

Cost of the incinerator is about $200,000.

A new-type rubbish incinerator has successfully passed strict tests required by the Los Angeles County Air Pollution Control District. The new unit, built at Pomona by the Los Angeles County Fair Association to burn combustible rubbish, has a capacity of 75 tons in 24 hours. It is the first rubbish burner of its type to pass the capacity and particulate matter tests of the LACAPCD.

The new incinerator was designed by Airtrol, Inc., of Los Angeles and built by the Fair Association staff. It is of the suspension burning type with burning grate made up of slowly revolving arms that turn the rubbish as it is burned.

Combustion efficiency comes from two features: Only 10% of the air needed for combustion is underfire air, the remainder is induced through ports and forced air jets. And the path of combustion products is carefully regulated through the primary and mixing chambers for thorough burning. Particulate matter control comes from high combustion efficiency and from a special chamber called the Airtrol chamber that slows flow to allow particle fallout.

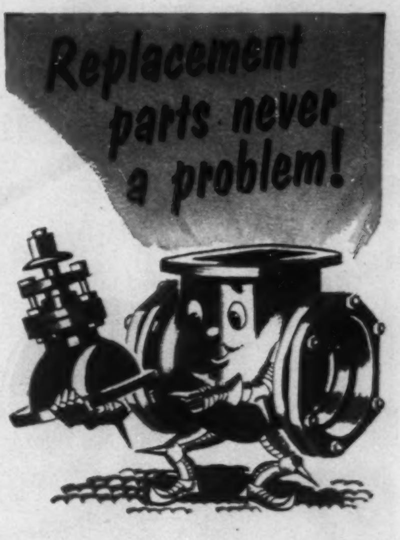
The Fair Association has built an incinerator type that might serve as the answer to rubbish disposal problems in this smog-plagued area. It certainly solves the particular critical problem in providing for disposal of the rubbish of the fair grounds—mixture of paper products and picnic refuse. Although it is intended at Pomona for combustible rubbish, its designers are confident it can effectively burn mixed garbage.

• **Smog tests**—The LACAPCD works on a permit and test system. New industrial installations that will emit smoke, fumes or gases must get a permit from the district before construction can start. And before plant operations begin, the installation has to pass performance tests.

Governmental units such as municipalities are not required to get permits in advance. And it has not yet been legally established whether installations constructed for municipal use must meet the district's standards. That's one reason why the Pomona incinerator is the first unit of its type to meet the tests.

To pass the capacity test—one of two tests used by LACAPCD—the incinerator cannot emit excessive smoke more than three minutes in any one hour. Excessive is defined as #2 on the Ringelmann scale or 40% capacity. The three minutes are accumulative: that is increments of, say, 20 seconds each can add up to make three minutes. And the hour can be any hour.

The other test—for particulate matter—is the more difficult to meet. It is not a new requirement. But it is applied with more thoroughness now than has been the case in the past.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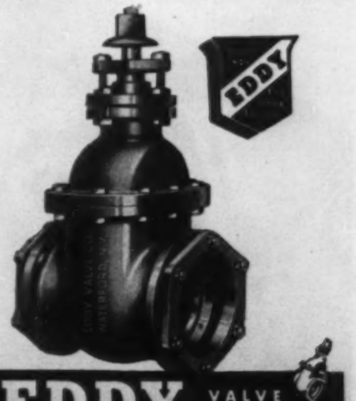

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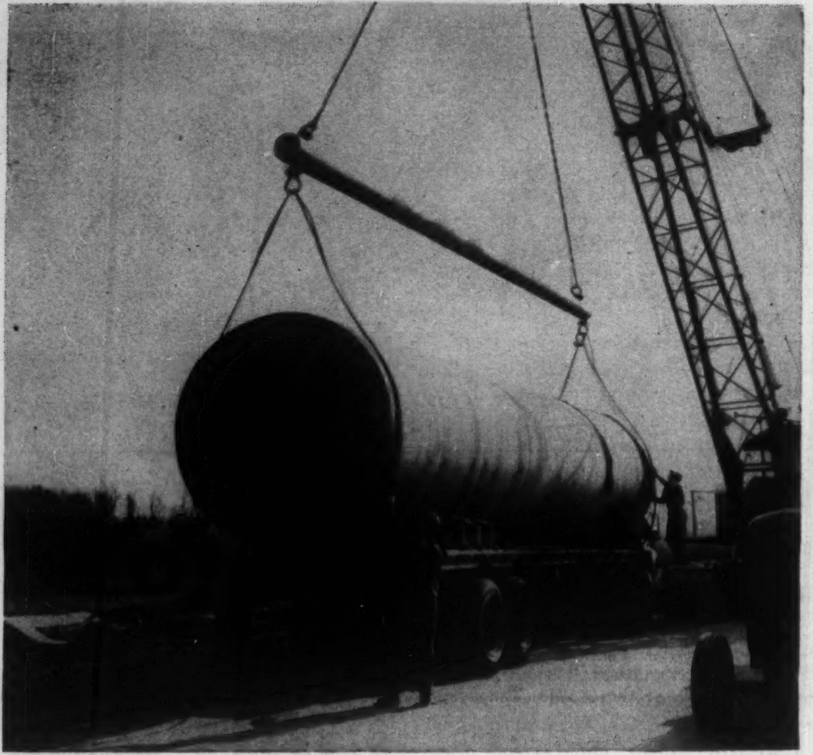


40-FT LENGTHS of 96-in. steel pipe went to make Bethlehem Steel's new carrier of sewage-works effluent to Sparrows Point as industrial water.

Sewage-Water Pipeline to Steel Plant

A new steel pipeline of the uncommonly large diameter of 96-in. has been constructed by Bethlehem Steel Company into its Sparrows Point plant from the Back River sewage works of Baltimore, Md.

Paralleling a 60-in. pipeline in 1942, the new 23,800-ft connection gives Bethlehem capacity to take 190 mgd for industrial use—the entire effluent of Baltimore's plant. (See "Quenching Industry's Thirst", ENR May 1, 1952, p. 66.)

• Pipelaying methods—The 96-in. ID pipeline was installed in 40-ft sections weighing as much as 14 tons each. Welded joints between sections had to be made after the pipe was laid to grade. Since the invert of the pipe was always more than 13 ft below ground level, special preparations of the trench were necessary to allow good access to the joints.

Groundwater, where encountered, was taken care of with a well-point system. Unstable banks were held back with temporary sheeting of steel H-beams and steel plates. This type of sheeting required a minimum of cross bracing and did not complicate the lowering of the 40-ft sections into the trench. Bell holes were prepared at each joint location to allow welding and coating underside of the pipe.

The 40-ft 14-ton sections of pipe were placed in the trench with only one crane. Special spreaders made of 40-ft sections of 12-in. pipe were used, each equipped with a clevis at either end to hold a wire rope sling.

After the pipe was lowered into the trench and placed against the previously laid section, lugs were welded to both sections to allow drawing the pipes together. A 5/32-in. spacer was placed between the pipe ends to insure proper spacing for welding. Spacers were 2 x 3½-in and were made from 5/32-in. plate with a 2½ x 7/16-in. slot so that ⅜-in. keys could be inserted and driven to round up the ends of the pipe.

Pipe ends were beveled in the shop 30 deg inside and out to allow welding the joint 50% from the inside and 50% from the ouside. Portable sheet metal frames fitted over the pipe at the joints to protect the welders.

After the joints were welded, they were tested by the soap and vacuum method. The outside of the joint was then coated and wrapped with coal tar enamel and 15# felt.

Before backfllling, jacks were in-

PREPARED TRENCH had to be finished carefully for line and grade before . . .

PIPE WAS PLACED. Bell holes are needed for welding and coating bottom of joint.

COATING JOINT after it is welded, workman is within protection of movable metal trench sheeting.

stalled inside the pipe to elongate the vertical diameter to 99 in. This procedure was used to reduce the maximum net deflection after the pipe was completely backfilled.

Backfilling up to 2 ft above the top of the pipe was done in 6-in. tamped layers. Tamping was done with pneumatic hand tampers. The remaining backfilling was done with bulldozers.

After backfilling was completed, the jacks were removed and the internal joints coated with coal tar enamel. The entire pipe was then spark tested to detect "holidays" in the internal coating.

• **Heavy material**—Pipe used had wall thicknesses of $\frac{1}{2}$ in., 9/16 in. and $\frac{5}{8}$ in. The three different wall thicknesses were due to the varying depth of cover which ranged from 2 ft to as much as 22 ft. Walls of $\frac{1}{2}$-in. were used for cover up to 11 ft; 9/16-in. for cover from 11 to 17 ft; and $\frac{5}{8}$-in. for cover above 17 ft.

The pipe was fabricated, coal-tar enameled inside and out, and wrapped at Bethlehem's Steelton, (Pa.) plant. Total weight of the pipe was 7,800 tons.

Field construction was started in November, 1954. C. J. Langenfelder and Son, Inc., of Baltimore, Md., was the contractor handling the excavation, backfill, tamping and dewatering; Tom Banfield was their project manager.

Design engineer for the project was Whitman, Requardt and Associates, of Baltimore, with Roy E. Ritter, partner-in-charge, and Roger T. Powers project engineer.

Bethlehem's fabricated steel construction division handled the laying and welding of the pipe. George B. Shaw, manager of erection for Bethlehem's Pittsbugh district, was in charge of this phase of the work. Kopers Co. was subcontractor for field coating the joints.

F. A. Baker is assistant chief engineer for Bethlehem at Sparrows Point.

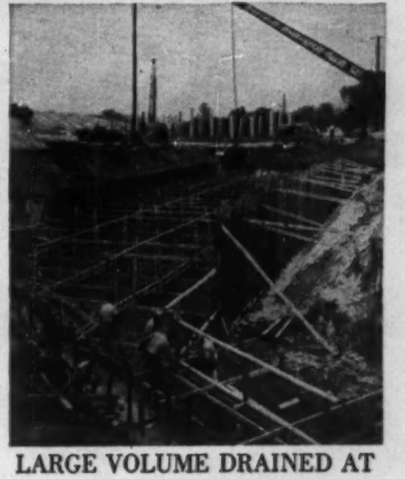
• **Related project**—A related project undertaken by Bethlehem at the same time was the installation of a 9,400-ft industrial water distribution main extending from the pumping station at the reservoir to various consuming facilities within the Sparrows Point plant. Approximately 7,700 ft of 60-in. ID x 7/16-in. and 1,700 ft of 48-in. ID x $\frac{3}{8}$-in. welded steel pipe was required for this water supply.

Housing Hearing Denied

The South Carolina Supreme Court has turned down a rehearing on Columbia's controversial substandard housing law. Last month the court handed down an opinion in which it upheld the ordinance as valid except for certain general discretionary powers included in one section (ENR July 28, p. 17).

HOW TO HANDLE
WET JOBS

RELOCATION OF
HOGAN'S CREEK
Jacksonville, Florida
Contr: Duval Eng'g & Cont'g Co.



LARGE VOLUME DRAINED AT
VERY LOW FUEL COST

EXCAVATION ON this job was 15 ft deep (see photo) and ground water had to be lowered 10 ft in difficult soil (very fine sand with clay lenses.) How would you have estimated fuel requirements, figuring approximately 400 ft of header-line perimeter?

• Actually, one diesel-powered Griffin pump, working continuously 'round-the-clock, consumed only 35 gal of fuel each 24 hrs, even though on jobs of comparable scope, the average diesel pump will usually eat up anywhere from 40% to 80% more than this quantity. Thus the every-day savings to the contractor were appreciable.

• Another interesting feature was the use by Griffin engineers of a new type slip-on swing joint (see photo) to speed installation of the wellpoints. Any wonder contractor termed the job "100% success!"

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WELLPOINT CORP.
881 East 141st Street, New York 54, N. Y.
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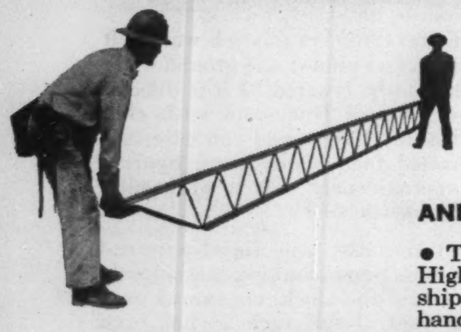
In Canada: Construction Equipment Co., Ltd.
Toronto Montreal Halifax

Richland Junior-Senior High School, Richland Township, Allegheny County, Pa.
Architects: Joseph Hoover, and Franklin, Douden & Associates.
General Contractor: Rea Construction Company



AmBridge Standard and Long Span Steel Joists are prefabricated and delivered to the job ready for immediate use.

*

Their light weight means less deadload—permits economy in structural supports.

*

Easily erected in any kind o weather.

"On this large school New-Design Steel Joists saved us time and money

AND WE GOT STRONGER, SAFER, MORE MODERN BUILDINGS, TOO!"

• The new Richland Junior-Senior High School plant in Richland Township, Allegheny County, Pa., is as handsome and modern as you'll find anywhere.

Built solidly on and around a strong frame of structural steel, fabricated and erected by American Bridge, it bids fair to become a model for similar light occupancy structures.

Contributing to the strength and safety of the buildings are AmBridge steel joists, which are used throughout for all roof and floor supports.

105 tons of new-design AmBridge standard steel joists, and accessories, and 60 tons of AmBridge long span steel joists and accessories were used for the roof supports of the 72′ x 154′ auditorium; for the floor and roof supports of the 61′ x 325′ classroom area; and for the roof supports of the 120′ x 124′ gymnasium.

In the words of the contractor: "On this large school, these new-design AmBridge steel joists saved us time and money, and we got stronger, safer, more modern buildings, too."

For further information about the time-and-labor saving advantages of new-design AmBridge steel joists, contact the nearest sales office, or write.

FREE BOOKLET FOR YOU: If you design or build light occupancy structures, this free booklet points the way to faster, simpler, better, more profitable construction. It is the only complete steel joists catalog with design information for spans up to 120′ which you can use to improve your construction methods . . . and make more profit out of future jobs. ***WRITE FOR YOUR FREE COPY!***

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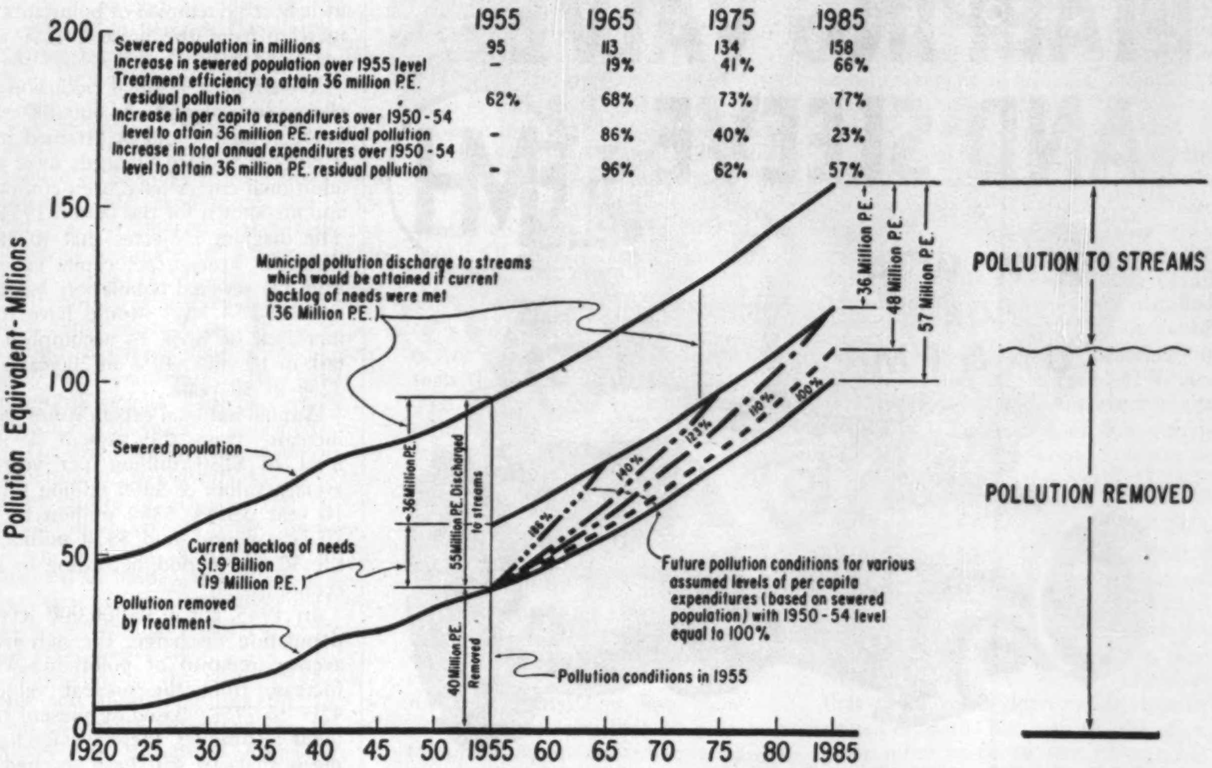
UNITED STATES STEEL EXPORT COMPANY, NEW YORK

AMBRIDGE STEEL JOISTS

USS

POLLUTION TRENDS – MUNICIPAL SEWAGE



	1955	1965	1975	1985
Sewered population in millions	95	113	134	158
Increase in sewered population over 1955 level	–	19%	41%	66%
Treatment efficiency to attain 36 million P.E. residual pollution	62%	68%	73%	77%
Increase in per capita expenditures over 1950-54 level to attain 36 million P.E. residual pollution	-	86%	40%	23%
Increase in total annual expenditures over 1950-54 level to attain 36 million P.E. residual pollution	-	96%	62%	57%

200
150
100
50
0
Pollution Equivalent - Millions
1920
25
30
35
40
45
50
1955
60
65
70
75
80
1985
Municipal pollution discharge to streams which would be attained if current backlog of needs were met (36 Million P.E.)
Sewered population
Current backlog of needs $1.9 Billion (19 Million P.E.)
Pollution removed by treatment
36 Million P.E.
55 Million P.E. Discharged to streams
40 Million P.E. Removed
Pollution conditions in 1955
185%
140%
123%
110%
100%
Future pollution conditions for various assumed levels of per capita expenditures (based on sewered population) with 1950-54 level equal to 100%
36 Million P.E.
48 Million P.E.
57 Million P.E.
POLLUTION TO STREAMS
POLLUTION REMOVED

PHS Draws New Picture of Pollution Problems

A projection of various levels of expenditure on municipal sewage treatment facilities has been drawn by the U. S. Public Health Service.

Its main point, according to John H. Ludwig, chief of the agency's economics section, is that efficiency of treatment must be increased just to maintain status quo in the face of population growth. Present practical treatment methods will need improvement soon if the job of pollution control is to be done adequately, says Ludwig.

At present, for a sewered population in the U. S. of about 95,000,000 it is estimated that the discharge of municipal sewage to natural water bodies, after treatment, is equivalent to the raw sanitary sewage from 55,000,000 people. This means that at present the nationwide average removal of biochemical pollutants by sewage treatment facilities is about 42%.

The present situation in stream pollution exceeds by about 19,000,000 population equivalent the level of pollution which would result if the current backlog of needs for sewage treatment facilities were constructed and put in operation at the present time. The discharge of sewage would thereby be reduced to the equivalent raw sewage of 36,000,000 people, and the nationwide average removal of pollutants would be increased to 62%.

• **Future charted**—This chart, based on present treatment methods and costs is drawn to show effects of growth in population and urbanization. It is intended to show trends in pollution discharge to streams and BOD removals necessary to obtain various degrees of stream sanitation based on nationwide averages. It is not intended to represent future conditions in individual localities, warns Ludwig.

The diagram, for the period 1920-55 indicates (1) sewered population and (2) pollution removed by treatment in terms of population equivalent. The ordinate between these curves represents the biochemical pollution load discharged to streams. At the 1955 point, it is indicated that present discharge to streams is equivalent to 55,000,000 population, which, if current backlog of needs were met, would be reduced to a figure of 36,000,000.

For the period 1955-85 pollution trends have been projected based on anticipated increases in sewered population and present treatment methods and costs. As a baseline to measure future expenditures for control of water pollution due to municipal sewage, the 1950-54 per capita expenditures for municipal treatment facilities, including interceptors, amounting to about 2.42 per year for each person sewered in the nation, has been set at 100%.

Projection of per capita expenditures in this amount for the 1955-85 period results in the lowest line shown on the diagram and labelled "100". It is indicated that for this level of expenditure, the pollution discharge to streams in 1985 would be equivalent to the raw sewage of 57,000,000 people, which is roughly the same as it is today.

In other words, present per capita expenditures based on sewered population, if continued, will just be sufficient to take care of additional needs due to increased population and obsolescence. Municipal pollution problems which plague us today will still be with us.

Actual annual expenditures during this period, due to the increase in

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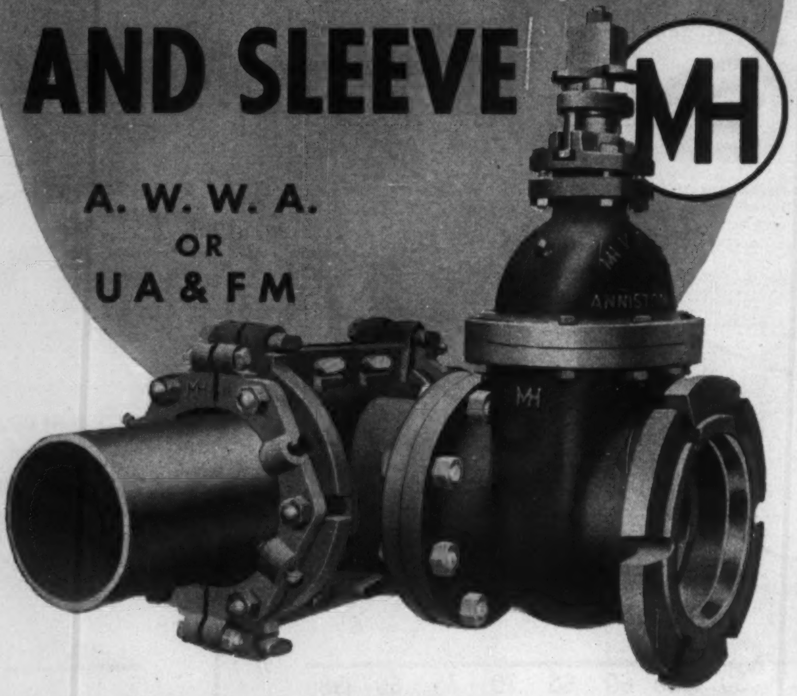

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sewered population, will increase from the 1950-54 level of $230 million per year to about $360 million per year, both figures in 1954 dollars. Nationwide average removal of pollutants will increase from the present 42% average to 64%.

To attain a residual pollution discharge equivalent to 36,000,000 population, which would be attained today if current backlog of needs were met, additional curves have been computed and are shown for the period 1955-85. The diagram indicates that to attain this goal, average per capita expenditures per sewered population, based on the 1950-54 level, would have to be increased by 86% to accomplish the task in 10 years, 40% in 20 years, and 32% in 30 years.

Annual national expenditures would increase, from the present 1950-54 level of $230 million per year, to average values of $450 million for the 10 year period, $380 million for the 20 year period, and $370 million for the 30 year period, according to PHS economists.

In 1985, for a 36,000,000 level of population discharge, the nationwide average removal of pollutants would increase from the present value of 42% to 77%. Based on present treatment techniques, these average figures mean that we will have reached the upper limit of practical treatment methods, as we know them today, sometime during the next 20-30 year period, and that local areas will be affected even before then.

The data on the upper part of the diagram concern the projected sewered population, average removal of pollutants, and increases in expenditures on per capita and annual bases to attain a residual pollution load discharge of 36,000,000 population.

Sales Tax Takes Its Toll

Buyers of building materials turned out to be the top sales-tax payers in Florida during the past year.

The lumber, builders and contractors group paid some $16.8 million in sales taxes for the fiscal year ending June 30. This compares with $14.5 million for the previous year and adds up to more than one-fifth of the total collections of $74 million.

Lumber and building materials bore $11 million of the total tax, up nearly $2 million over last year. Gains also were shown in roofing, sheet metal, decorating, painting, electrical, plumbing, heating, and air conditioning.

The only decline in the building supply group was in the building contractors classification, which showed a total of $699,000 compared with $761,000 the year before.

Probable Life of Pipe Culverts

Robert L. Mueller
Field Research Engineer
Armco Drainage & Metal Products, Inc.
Middletown, Ohio

A recheck of the condition of a number of pipe culverts that were studied in 1943-44 to determine their probable life expectancy was made last year. It showed that the life expectancy estimate of 50 years made ten years ago (ENR Oct. 18, 1945, p. 110) can be upped to near 60 on a very conservative basis. If the depreciation that took place in the culverts that were reexamined last year is given full weight, a life expectancy approaching 80 years is indicated.

The original study was made on 355 structural-plate culverts in 34 states. They ranged in diameter from 60 in. to 180 in. Each was given a numerical rating based on the condition of the material in them using the code numbers given in the accompanying table. Those ratings are believed to be on the conservative side.

Subsequently the rating given each pipe was plotted against the age of each culvert to determine the life expectancy of the group. Projection of a line drawn through the points gave a life expectancy of at least 50 years.

• **Reinspection after ten years**—Ten years after the first report was written, question was raised as to whether or not the present condition of the pipe structures would substantiate the findings of the earlier investigation.

To determine the scope of reinspection, a limited number of pipe in each of 31 states was checked by local personnel. The pipe included installations in virtually every type of service condition. Many installed in mountainous regions are subjected to severe erosive wear. Others in swampy land must resist the action of corrosive waters. Still others in dryer areas carry flow from intermittent storms only. While the performance of these structures is important in itself to those localities, little could be gained by averaging the varying service conditions of these pipe, even as a check on previous results, because of the few numbers in each service condition.

To determine more accurately what changes occurred in the condition of those pipes between 1944 and 1954, it was decided that a representative number of structures that served under similar and more or less average conditions should be reinspected. The reason for this was that inspection results of a uniform service group would more likely provide sufficient information to confirm or disprove the earlier findings.

During the early part of 1954, 6 pipe in Indiana, 23 pipe in Ohio, and 32 pipe in New York were reinspected by the author. Of the total number of pipe inspected in these three states, 52 pipe were rated. High water prevented an accurate rating of the other pipe. All these pipe are subjected to much the same service conditions, since the continuous low flow is more corrosive than erosive in nature. None of the pipe was protected with other than the standard galvanized coating. The 52 pipe were given a numerical rating in accordance with the same method used in 1944.

No attempt was made to differentiate between structures of different gages. However, none of the pipe inspected had invert plates lighter than 7 gage.

In no case was there any appreciable corrosion on the outside of the pipe. As would be expected, the most severe condition existed either in the very invert or at the flow line.

It is noteworthy that all pipe were found to be in the same condition structurally as they were ten years previously. In other words, practically all the deflection of a structural-plate pipe can be expected to occur within the first 5 to 10 years the pipe is in the ground.

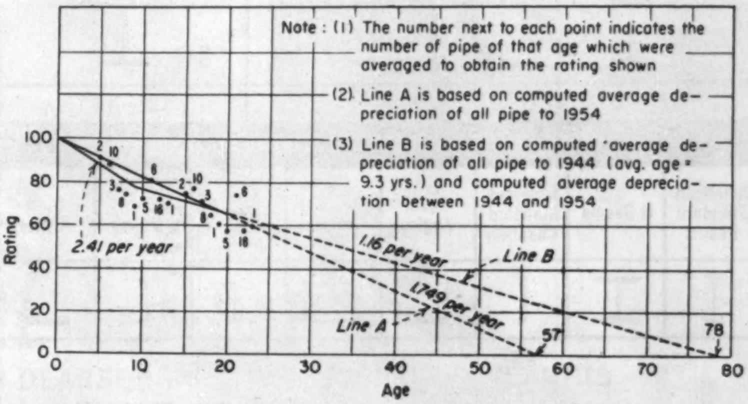
• **New life-expectancy study**—After ratings had been applied to the 52 pipe covered in the 1954 review, the new ratings were plotted against age in 1954 along with the 1944 ratings for the same pipe, see graph below.

The two lines drawn through the points on that graph are based on arithmetical computations. The location of the straight line (1.749% depreciation per year) is based on the computed average depreciation of all pipe from the date they were installed to 1954. The broken line is based on the computed average depreciation of all pipe up to 1944 (2.41% depreciation per year to an average age of the pipe inspected of 9.3 years), and the computed average depreciation for the last ten years (1.16% depreciation per year).

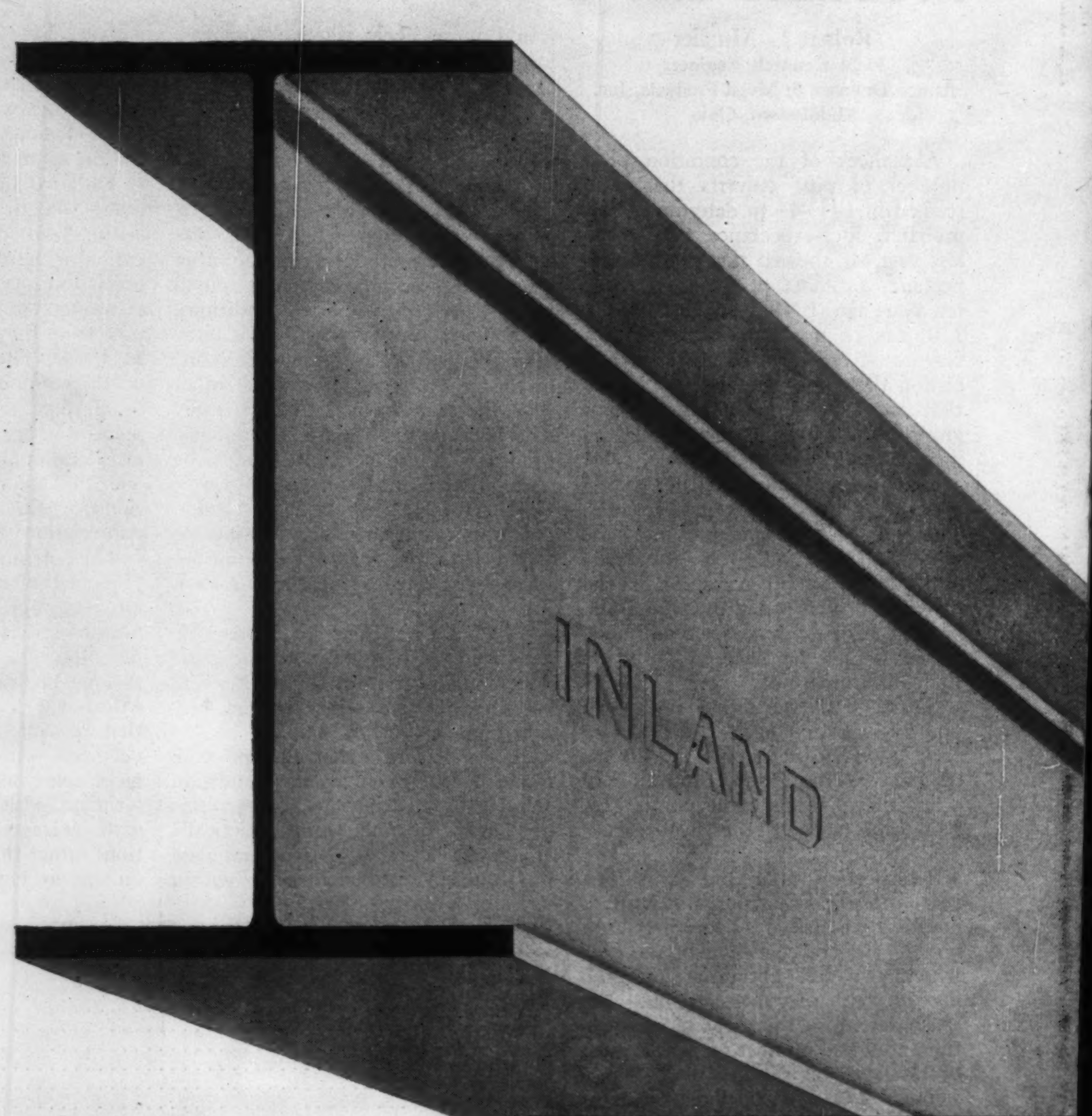
The present average age of 19.3 years of the structures reinspected and rated is more than sufficient to establish a reliable minimum expected life. It is reasonably certain that the average life expectancy of these pipe will be at least 57 years. The fact that the rate of depreciation usually decreases with the age of the pipe gives some merit to the 78-year life estimate, which is based on two separate averages from the two inspections rather than the 57-year life based on one average of both inspections.

Rating Code for Multi-Plate Culvert Pipe

Description	Numerical rating
Spelter like new	95.0
Spelter dull	92.5
Spelter very dull	90.0
Pin point rust spots	87.5
Spelter entirely gone	85.0
Light rust film	80.0
Shallow pitting	70.0
Scaly rust or pits not half-way through metal	60.0
Heavy rust or pits half-way through metal	45.0
Heavy rust or pits three-quarters through metal	30.0
Few holes through metal	15.0
Large areas of metal gone	0.0



DURABILITY RECORD of multi-plate culvert pipes under slightly corrosive conditions and continuous flow.



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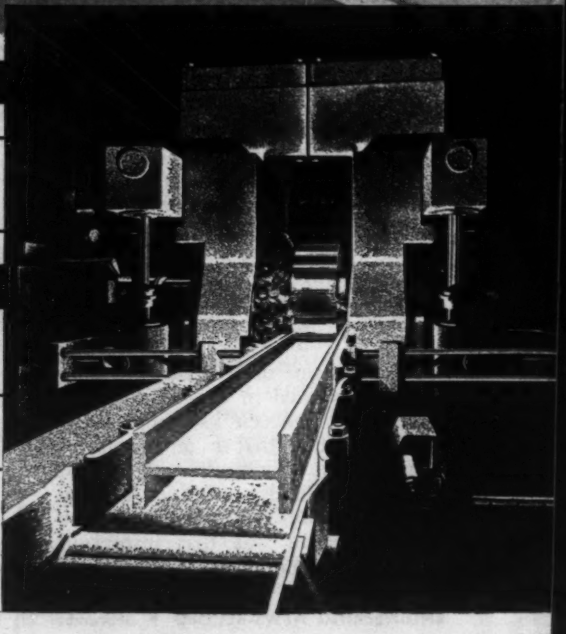
WF Beams	WF Light Beams	WF Joists
I	I	I
8″— 24″	10″— 12″	10″— 12″

OTHER INLAND STANDARD STRUCTURAL SECTIONS							
American Standard Beams	H-Beams	American Standard Channels	Equal Angles	Unequal Angles	Zees	Ship and Car Building Channels	Bulb Angles
I	I	[	L	┘	Z	[	]



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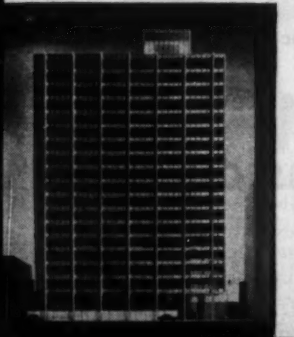

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type beams.

FOCUSING is done with knob atop telescope. Bull's eye level is below to rear.

COMPACT TO CARRY, the adjustable tripod telescopes; the instrument's base forms bottom of the metal carrying case.

On Periscope Level . . .

Suspension Device Makes Leveling Automatic

With its objective lens suspended by three wires, fine leveling of a new Italian-made instrument is automatic. All that's necessary is to roughly center the bubble in a bull's eye level—gravity does the rest.

Built in the style of a periscope, the upright portion of the level houses the suspended objective lens and a prism mounted above. The objective lens is held loosely in place by a flanged ring to prevent damage if the instrument is inverted while it is being moved about. It is necessary to roughly level the instrument before sighting to free the lens from contact with the ring.

A prismatic device projects an image of the bull's eye level into the field of view of the telescope eyepiece. This permits the operator to check the level of the instrument at the same time as he makes a reading from the rod or station.

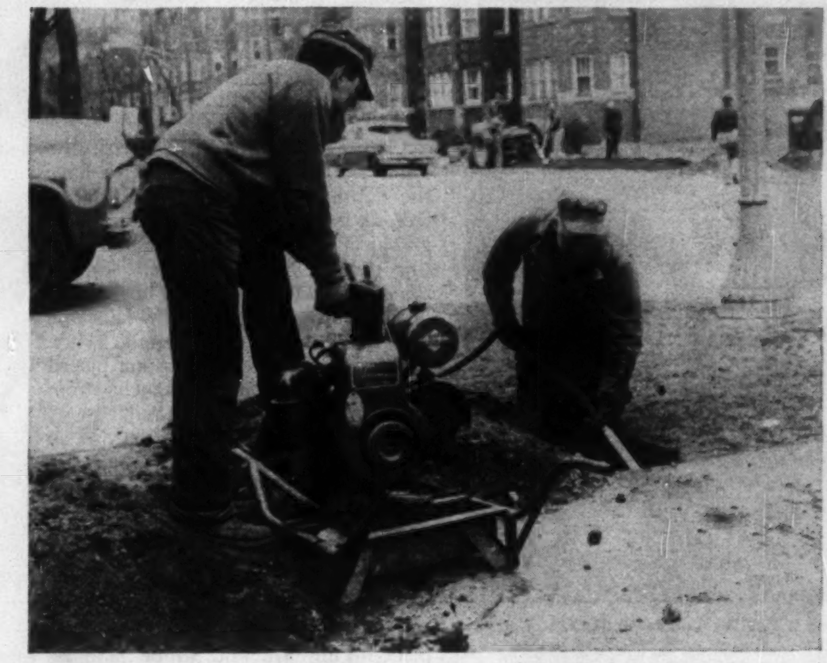
The ratio of the stadia lines is 1:100 so distance readings are made in the orthodox manner. Horizontal angles can be read by means of a reading eyepiece mounted next to the telescope. The horizontal circle is graduated into divisions of 10 min each. By estimation the instrument man can read angles to 1 min.

For more accurate reading of rod graduations, the instrument can be equipped with a micrometer screw. The arrangement permits raising and lowering the entire instrument until the central horizontal line of the reticle appears on the rod graduation; a graduated scale on the edge of a horizontal drum near the base of the level indicates the vertical distance moved. The micrometer reading is added to or subtracted from the rod graduation to produce the effective reading to 0.001 ft. Cost of the optional attachment is $90.

The standard instrument has a 24X telescope and is accurate to within 0.028 ft per mi—second order—while the instrument with the micrometer base is accurate to within 0.010 ft per mi, according to the manufacturer.

The instrument comes complete with a specially designed carrying case and adjustable leg tripod—total weight is about 21 lb. Price of the standard unit is $350. FILOTECNICA SALMOIRAGHI, INC., 41-14 24TH STREET, LONG ISLAND CITY 1, N. Y.

HOUSING REMOVED, suspension and prism are shown. Thin wires hold lens.



Borer Bores Without Removing Soil

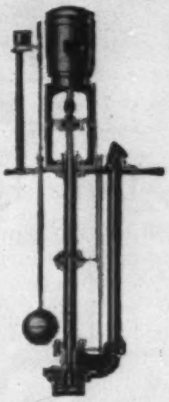
Without removing any soil, a newly-designed vibratory earth borer can make a 2-in. dia hole under concrete sidewalks and driveways. According to the manufacturer, the boring head stays on a steady, level course all the way to make laying underground piping and wiring a simple task. Wheelbarrow mounted, the borer is portable. Mall Tool Co., 7725 S. Chicago Ave., Chicago 19, Ill.

Portable Heater Travels Everywhere

The Master B-100 portable heater is a 78-lb furnace on wheels that can be lifted or wheeled by one man to wherever it might be needed. The unit has a 100,000 Btu per hr capacity with an electric ¼-hp fan and pump motor that circulates warm air at the rate of 500 cfm. Burning #1 or #2 fuel oil or kerosene, the heater has a 12-hr fuel capacity. Cost of operation is reported by the manufacturer to be around 12¢ per hour. Master Vibrator Co., 362 Stanley Ave., Dayton 1, Ohio.

Archie says:—
the pump to select
—for industrial wastes—
to handle drainage and seepage—
process wastes and certain acids
—for sewage treatment plants to raise effluents—

YEOMANS
Series 3000



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for solids-free liquids

Protected by LUBRI-VAC® Lubricating System which gives positive lubrication to the radial bearing and eliminates scoring. A new type impeller with repelling vanes and lubricating lines to bearing and lubricant are an essential part of the system and tests prove that LUBRI-VAC reduces bearing failures and pump servicing by 90% to 95%—increases pump life by as much as 12 times.

Series 3000 Heavy Duty Wet Pit Pumps are supplied as complete units and include pump casing, impeller, shaft, suspension and discharge pipes, thrust bearing and flexible coupling assembled on suspension plate with catch basin or sump cover—with motor and automatic control equipment. Normally furnished with standard float and stand, but special automatic controls and floats supplied as specified. Gravity or forced feed automatic or non-automatic lubrication as required. Capacities from 15 g.p.m. to 1200 g.p.m., heads to 75 ft.

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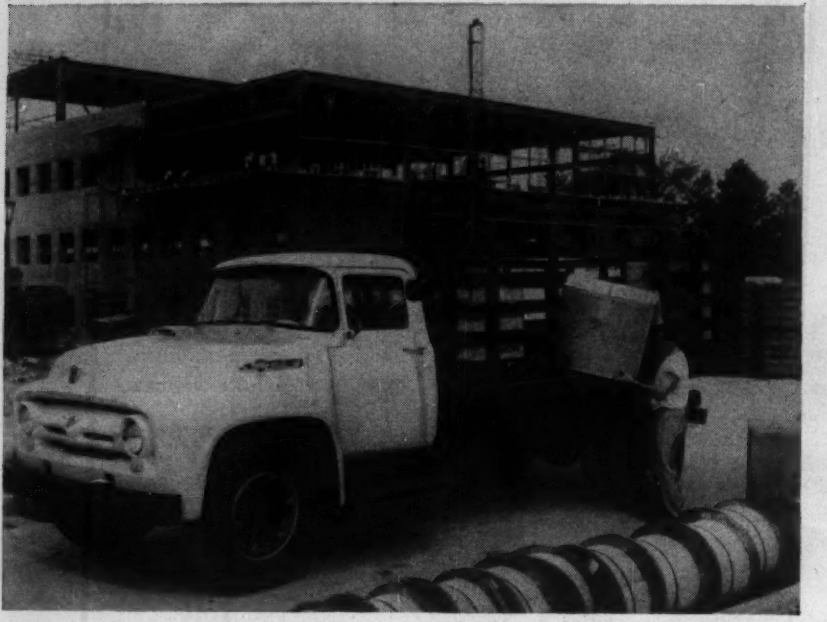
NEW PRODUCTS



FORD'S 1956 F-750 is a heavy-duty truck with a GVW of 21,000 lb. Engine is a 168-hp Y-8 equipped with a four-barrel carburetor. Available in five wheelbases.

Heavy-Duty Tandem for 1956 Ford Line

Ford's 200 new 1956 truck models will go on display throughout the country tomorrow, September 23.

Two new models have been added to the line—a T-750 Tandem-axle model in the heavy truck series (GVW 36,000 lb) and a new, longer wheelbase pickup.

Gross vehicle weights extend from 5,000 lb on the pickup to 42,000 lb on the heavy-duty tandem-axle models.

Introduced for the first time to the trucking industry are two standard safety features—a safety steering wheel and safety door latches. Seat belts are optional. The safety steering wheel is designed with a rim three inches above the horn button to give the driver's chest added protection from the steering column in case of a crash. Also, a new safety door latch has been designed to reduce the chance that doors will open in an accident, providing occupants added protection from being thrown out of the cab.

Horsepower has been increased in all engines, by 12.7% in the smallest (rated at 133 hp) to 17.6% in the largest (rated at 200 hp when equipped with a four barrel carburetor). In the medium-heavy truck series, a special heavy-duty 168 hp Y-8 engine is available equipped with a four-barrel carburetor. In the heavy truck series, an optional power package consists of four-barrel carburetion, dual exhausts and special cold-air intake. The intake is a hood airscoop to increase efficiency and performance. The 332 cu in. engine develops 200 hp with this equipment.

Another option is a thermostatic fan which adds power to heavy trucks by disengaging the engine fan at low operating temperatures. This provides up to 18 more usable horsepower at the clutch.

Power steering will be available this year as an option on conventional heavy trucks. It is standard equipment on tandem models with 302 and 332 cu in. engines. FORD DIV., FORD MOTOR CO., P.O. BOX 638, DEARBORN, MICH.

Printed Markers Speed Up And Ease Grading Operations

A new type of grading marker that consists of a heavy, water-resistant paper sleeves is reported to effect worthwhile savings in time when grading operations are to be done. By presenting cut and fill requirements in graphic form as well as numerically, the markers eliminate the time consumed while the equipment operator hops off his rig to clean and read a keel marked stake.

Made in two types—cut and fill—the fill marker has a black section at the bottom to designate the depth of material required; the top of this section or border indicates the finished grade. In the white section above the black, fill markers are printed with the letter "F" and below this is a numeral indicating the depth of fill in 10ths of feet.

Cut markers are printed with the letter "C" at the top and also have the depth of fill printed in 10ths of feet. A border is also used to indicate graphically the depth of cut but since this cannot be done directly an alternate method is used. The bottom of the border automatically falls one foot above the finished grade when the bottoms of the markers are placed at the original rod reading elevation. Cut markers are printed in red.

The markers are available in an assortment of sizes for cut and fill. One hundred cut and fill markers for average usage can be obtained at a cost of $5.

The markers are open at both ends and slip over the regular wooden stake normally used; in extremely windy conditions they should be stapled in place. They are said to be fade resistant and after five years of local experience have proved to last two to three months and still provide maximum visibility. According to the manufacturer, the markers can be read at distances up to 600 ft. HARGUS MARKERS, 501 W. H ST., BRAWLEY, CALIF.

GRADE MARKERS such as these are more easily visible than keel marked stakes. The paper sleeves indicate the depth of cut or fill numerically and graphically.

OBITUARIES

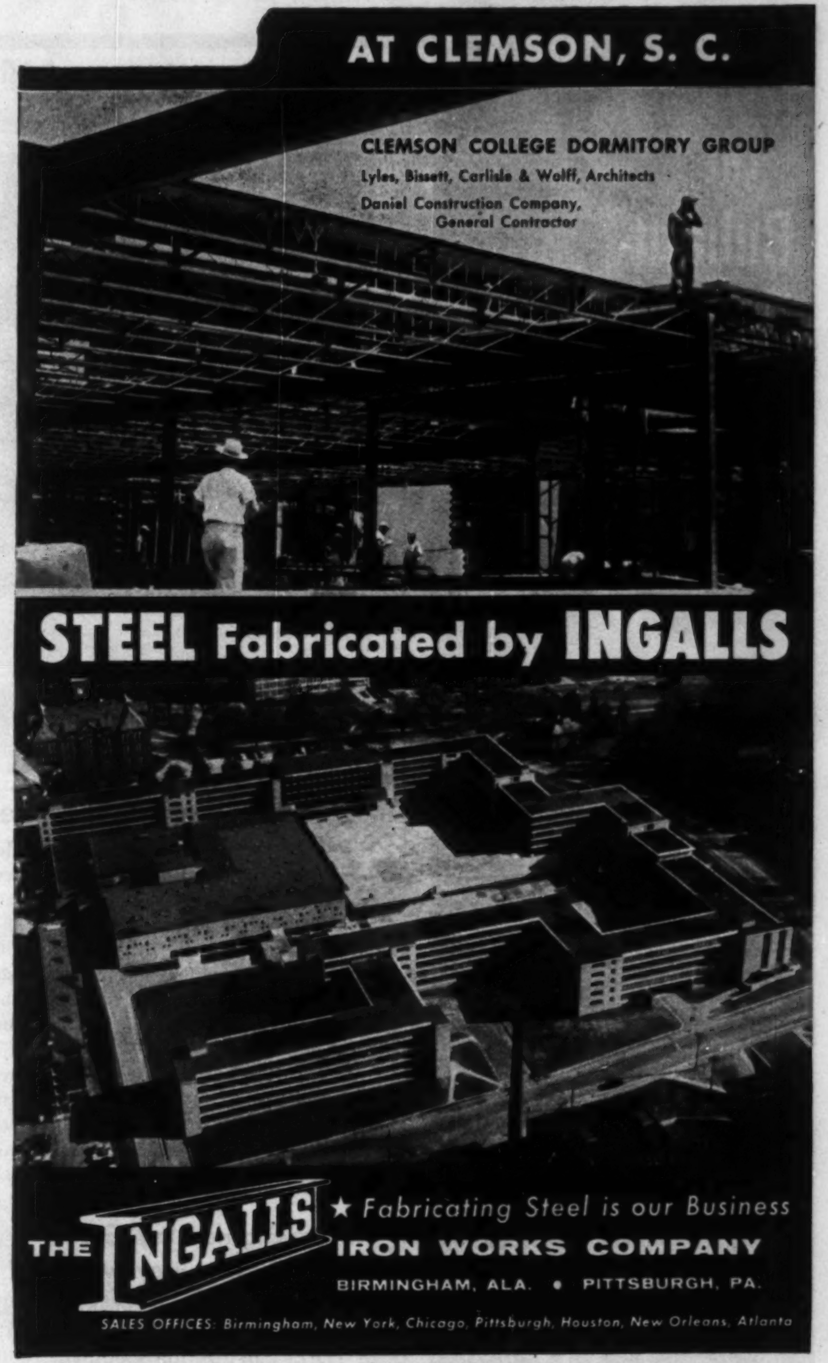
Henry S. Jacoby, 98, one of the country's great engineering teachers and influential authors in the field of structures for more than half a century, died last month in Washington, D.C. Since 1922 he had been professor emeritus of bridge engineering at Cornell University, where he had taught continuously since 1890. Professor Jacoby was graduated from Lehigh University in 1877, then worked for eight years as chief draftsman in the U. S. Engineers' office at Memphis before beginning his teachings career at Lehigh. The author of several important books, his "Textbook on Roofs and Bridges", written in collaboration with Prof. Mansfield Merriman, then of Lehigh, was for many years a prescribed text in civil engineering courses across the country. Later well-known books were "Foundations of Bridges and Buildings" and "Timber Design and Construction," both under joint authorship with Dean Roland P. Davis of West Virginia University. Professor Jacoby was elected to honorary membership in the American Society of Civil Engineers in 1939.

Albert B. Hendricks, 74, civil engineer cited by President Theodore Roosevelt for his part in the construction of the Panama Canal, died at New Bern, N. C., Aug. 21. He became dredge captain during the digging of the canal and was on the first boat that passed through the canal after it was opened to traffic. Later, he served as head of the Canal's Recovery and Forwarding Division in charge of admittance of vessels to the locks.

Harold Z. Hakes, 64, retired, Seneca County engineer at Tiffin, O., from 1921 to 1932 died Aug. 21. In addition to being resident engineer for the Ohio Highway Department for ten years, he also served as safety-service director at Tiffin for six years. Hakes was a graduate of Ohio Northern University, Ada, O.

William D. Turnbull, 71, retired, former junior dean of the College of Engineering at Ohio State University, died Aug. 25. Turnbull, a graduate of Ohio State with a degree in civil engineering became junior dean of the College of Engineering in 1928, serving till his retirement in 1954.

Otto E Heinicke, 62, president and founder of Otto E. Heinicke & Co., consulting engineering firm of St. Louis, died Aug. 15.



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MEN AND JOBS

Behind His Dictates: 39 Years in Sanitation

Edward Peter Decher, Secretary of the Joint Meeting Sewerage Commission whose 56 miles of trunk sewer and treatment plant serve 11 municipalities in the Newark, N. J., area, will pick up the gavel of the American Public Works Association during its annual congress to be held at Milwaukee, Wis., October 2nd through 5th.

Licensed professional engineer, lecturer and contributor to the technical press, Decher started his career at the age of 13 under the late Edward S. Rankin, his predecessor as commission secretary as well as past president of APWA (1922). He has held offices in the N. J. Section of the Sewage and Industrial Waste Association and the N. Y.-N. J. Section of the APWA; was national treasurer, then eastern vice-president of the APWA; and is a member of the N. J. Sewage Works Assn. and the Newark Municipal Engineers' Assn.

Decher, who will succeed Warren A. Coolidge, Director of Public Works at Nashville, Tenn., is the second of Rankin's disciples to succeed him in the APWA post. The first was John S. Flockhart who served in 1940.

Harza Engineering Co. Promotes Two Key Men

Arthur P. Geuss and C. Keith Willey have been elected vice presidents of Harza Engineering Company, consulting engineers in Chicago, Ill.

Except for five years of service with the Corps of Engineers during the war, Geuss has been with the company continuously since 1936. A civil engineering graduate of the University of Illinois, he started in as a topographer and detailer, became chief civil engineer in 1950, and four years later was named chief engineer—a post which he will continue to hold.

Willey, who will continue to serve as western manager, joined the Harza organization in 1947 and was placed in charge of its project planning and power studies section. He worked on projects in Greece, Turkey, Iraq, the Philippines and Alaska, was assigned as resident engineer on the Box Canyon Hydroelectric Project in Pend Oreille County, Wash., in 1952, and was appointed western manager in 1954.

A civil engineering graduate from the University of Kansas, Willey later obtained a masters degree in hydraulic engineering from the University of Iowa.

New Los Angeles Engineer

A. Pardee Lyall has been appointed Los Angeles city engineer to succeed Lloyd Aldrich, who will serve as a consultant to the city on its $60-million sewer program.

Lyall received his engineering training at California Institute of Technology and has been with the city department for 32 years. His appointment is temporary, pending civil service examination.

CONSTRUCTION REPORTS

Bids Asked—Low Bidders—Contracts Awarded—First Section—

Compiled by Business News Department—Engineering News-Record, 330 W. 42nd St., New York 36, N. Y., ELSIE EAVES, Manager
J. A. MAHONEY, M. WETZEL, L. M. WINISKI, M. E. SCIORRA, F. S. DEMBEK, Reports.
J. H. WEBBER, M. R. ROESSLER, E. R. HUBER, Statistics.

NEW ENGLAND

HEAVY CONSTRUCTION—BA

STATE HIGHWAY LETTINGS
BRIDGES
September 27 Massachusetts
STREETS AND ROADS
September 26 Connecticut   September 27 Massachusetts
October 4 Massachusetts

Me., Presque Isle and Vt., Burlington—LIGHTING—BA On Or About 9/30—U. S. Eng., 857 Commonwealth Ave., Boston 15, Mass., airfield approach lighting, Burlington Municipal Airport, South Burlington, Vt. and Presque Isle Air Force Base, Presque Isle, Me. ENG-19-016-56-20. $25,000 each. CD 12/4/51, under Vt., Burlington.

† **R. I., Newport**—PIERS—BA 10/6—P. Wks. Office, First Naval Dist., 495 Summer St., Boston 10, Mass., rehabilitation of two piers; South Fuel Pier, 377x30 ft. south side, 80x50 ft. north side; 568x35 ft. between above at far end; North Fuel Pier, 296x62 ft., 352x55 ft. on south side of above at far end to incl. two new concrete decks, replace damaged, deteriorated and missing wood piles and other structural members, electrical, piping track work and mooring fixtures and appurtenances on the decks will be removed, stored and reinstalled, U. S. Naval Supply Depot, NOY 87229, Spec. 46343. Plans deposit $20. CD 3/24.

▲† **Me., Bangor**—AIRFIELD PAVEMENTS—BA On Or About 10/13— U. S. Eng., 857 Commonwealth Ave., Boston 15, Mass., airfield pavements and runway and taxiway lighting, FY-56, Dow Air Force Base, ENG-19-016-56-24, $6,000,000. Plans deposit $25. CD 8/29, under LB.

† **Mass., Falmouth**—RUNWAY, etc.—BA On Or About 10/18—U. S. Eng., 857 Commonwealth Ave., Boston, Zone 15, runway wid'n., airfield approach and taxiway lighting, Otis Air Force Base, ENG-19-016-56-22. $300,000-$400,000. Plans deposit $10.

▲† **Massachusetts**—TEXAS TOWERS—BA 11/1—First Naval Dist., 495 Summer St., Boston, constr. and emplacement of Texas Towers at three sites in the Atlantic Ocean, consisting of constr. on shore, towing to sea, and implanting on ocean floor, 3 large steel self-contained stable platforms, complete incl. adequate living facilities for personnel, mechanical and electrical services, each platform will be triangular in plan, about 20 ft. deep, each side about 200 ft. long, surmounted along one side by a super-structure or deck house 60x200x12 ft. high, each structure will be raised some 70 ft. above mean sea level and supported on 3 steel caissons partially filled with concrete and about 12 ft. and 14 ft. in dia., NOY 88202, Spec. 47141. Plans deposit $500.

BUILDINGS—BA

Mass., Monson—HOSPITAL—BA 9/30—Commonwealth of Mass., Dpt. Mental Health, c/o Div. Bldg. Constr., 38 Chauncy St., Boston, M-614 bldg. for disturbed females, State Hospital. $958,400. Plans deposit $50, refundable. Aisner & Atwood, 10 Newbury St., Boston, archts. CD 9/9.

▲ **N. H., Portsmouth**—SCHOOL—BA 10/7—City, Supt. Schools, Raymond I. Beal, 126 Daniel St., high school, west end off Summit Ave., Proj. NH 54-C-2AA. $2,500,000. Plans deposit $50. John N. Brownrigg, Jr. for Kenneth G. Reynolds Assoc., 143 Washington Ave., Albany, N. Y., archt. Weiskopf & Pickworth, 2 W. 45 St., New York, N. Y., structural engrs. CD 8/17.

BUILDINGS—SLC

▲ **Conn., Greenwich**—APARTMENTS—The Maher Bros. Corp., 54 Steamboat Rd., soon lets contract two 56-family apartments (Harbor Houses) Steamboat Rd. $1,900,000. O'Hara-Hedlander-Halosz & Edson, 45 Putnam Ave., archts. CD 8/3.

HEAVY CONSTRUCTION—LB & CA

MAINE—State Hy. Comn., State House, Augusta,
Thomas DiCenzo, 75 Barker St., Calais, Me. CA **$503,848**, est. $500,000. b. conc. surf., F.A. Proj. F037-1 (4), Monson and Shirley. CD 9/7, under LB.

† **U. S. Eng.**, 857 Commonwealth Ave., Boston, Mass. received no bids Sept. 12, maintenance dredging, Kennebec River, CIVENG 19-016-56-11, MAINE. Approx. **$50,000**. CD 9/8.

NEW HAMPSHIRE—State Dpt. P. Wks. & Hys., Concord,
Manchester Sand, Gravel & Cement Co., Inc., P.O. Box 536, Manchester, N. H., LB, **$969,238**, Class C-2, road mix hy. 2.917 mi. and 30 ft., rein.-con. frame bridge, Hooksett-Bow. Bids Sept. 9. CD 8/29.

Peter Kiewit & Son, 435 California St., Newtonville, Mass. CA **$797,092**, est. $800,000. Contr. 222 Sect. 129 Wellesley Exten. relief sewer, Needham and Dedham, BOSTON, MASS. Commonwealth of Mass., Metropolitan Dist Comn., Constr. Div., 20 Somerset St., Boston, Mass. CD 8/30, under LB.

P. V. Barone, 70 Glencoe St., Brighton, Mass. LB **$81,063**, est. $85,000. b. conc. paving Ackley Place, Jamaica Plain, BOSTON, MASS. City, Dpt. P. Wks., City Hall Annex, Boston, Mass. Bids Sept. 8.

Berke-Moore Constr. Co., Inc., 8 Newbury St., Boston, Mass. LB **$152,021**, est. $200,000. new entrance and exit facilities South Station, Cambridge and Dorchester Tunnel, BOSTON, MASS. Metropolitan Transit Auth., 31 St. James Ave., Boston, Mass.

Cataldo Constr. Co., 61 High St., Revere, Mass. LB **$73,687**, est. $73,000. storm drains, sewers various streets, REVERE, MASS. City, Dpt. P. Wks., City Hall, Revere, Mass. Bids Sept. 8. CD 9/1.

▲ **RHODE ISLAND**—State of R. I. & Prov. Plants, State House, Providence,
M. A. Gammino Constr. Co., 728 Valley St., Providence, R. I., CA, **$2,384,588**, est. $1,400,000. Contr. 5511, Contract No. 2, UI-03 (4), Fox Point Interchange, North-South Freeway, Providence. Bids Aug. 17. CD 8/22, under LB.

Giordano Contr. Co., 287 Main St., Branford, Conn., CA **$877,000**, Special AAA Facilities, Orange, West Haven (Site BR-15) Bridgeport Area, ENG-19-016-53-3, CONNECTICUT. U. S. Eng., 857 Commonwealth Ave., Boston, Mass.. Bids Aug. 23. CD 8/29, under LB.

▲ † **The Associated Constr. Co.**, 1010 Wethersfield Ave., Hartford, Conn., LB, **$792,726** Site A; LB **$956,277** Site C, Special AAA Facilities, East Windsor, Manchester, Glastonbury and Cromwell, Middletown, Hartford Area, ENG-19-016-56-4, CONNECTICUT. U. S. Eng., 857 Commonwealth Ave., Boston, Mass. Bids Sept. 7. CD 9/2;
Waxler Constr. Co., 118 Needham St., Needham, Newton, Mass., LB, **$803,115**, Site "B", (Connecticut).

City, William F. Nierintz, city engr., City Hall, Torrington, Conn., bids to have been opened Aug. 25, returned unopened, constr. Upper Wall St. Bridge and Palmer St. Bridge, TORRINGTON, CONN. **$90,000**. CD 8/16.

BUILDINGS—LB & CA

▲ **Highwood Homes, Inc.**, c/o Donald Almon, Inc., 10 Arlington St., Boston, Mass., Separate Contracts. $3,000,000. "Highwood", 200 RESIDENCES on 300 acres, MANCHESTER, MASS.

Raymond Webb, 45 Bay State Rd., Holyoke, Mass. CA Approx. **$100,000**. LAUNDRY and OFFICE, SPRINGFIELD, MASS. B & S Realty Trust, 80 E. Cottage St., Roxbury, Mass. Alfred Luoni, 230 Boylston St., Boston, Mass., designer.

▲ **Joseph Rugo, Inc.**, 581 Boylston St., Boston, Mass. CA **$1,824,970**. P-M-26, Contr. 1, ADMISSIONS TREATMENT BLDG., State Hospital, TAUNTON, MASS. State, Dpt. Mental Health, c/o Div. Bldg. Constr., 38 Chauncy St., Boston, Mass. CD 8/23, under LB.

MIDDLE ATLANTIC

HEAVY CONSTRUCTION—BA

STATE HIGHWAY LETTINGS
BRIDGES
October 7 Pennsylvania
STREETS AND ROADS
September 27 Maryland   October 7 Pennsylvania

† **Del., New Castle**—HOUSING—BA 9/27—U. S. Army Air Force, New Castle, housing, New Castle Air Force Base. $500,000. Extended date. Victorine & Samuel Homsey, 917 Gilpin Ave., Wilmington, archt. CD 8/3.

† **N. Y., Amagansett**—ANTENNA FIELD—BA 9/27—Dist. P. Wks. Office, Third Naval Dist., Federal Office Bldg., 90 Church St., New York, Zone 7, installation of new antenna field, U. S. Naval Radio Station, NOY 90350, Spec. 49028. Plans deposit $20.

Pa., Phila.—BA 9/27—Dpt. Procurement, City Hall Annex, sewers various locations, Bids 2466 to 2473, $500,000. Samuel S. Baxter, water comr. CD 2/4/44.

N. Y., Plattsburgh—BA 9/29—Henry A. Cohen, dir., Bureau Contracts & Accounts, The Gov. Alfred E. Smith State Office Bldg., Albany, rehabilitation to and grading sidewalks, State University Teachers College. Plans deposit $5.

N. Y., Woodbourne—SERVICE CONNECTIONS—BA 9/29—Henry A. Cohen, dir., Bureau Contracts & Accounts, The Gov. Alfred E. Smith State Office Bldg., Albany, heating work for service connections to Bldgs. Nos. 15, 16, 17, 18, 19, 22 and 25, Woodbourne Correctional Institution.. Plans deposit $15 constr., $5 heating.

† **N. Y., Sampson**—STEAM BOILER AND STOKER—BA 10/4—Purch. & Contg. Office, 3650 Military Training Wing, Sampson Air Force Base, Geneva, furnishing all labor, material, plant and equip. necessary to remove and replace steam boiler and stoker in Bldg. B-20, Sampson Air Force Base. CD 1/31/51.

PENNSYLVANIA—BA 10/7—State Hy. Dpt., 506 N. Office Bldg., Harrisburg,
Lackawanna Co.—constr. structures and grading, drainage, paving of Turnpike Sect. 37K part of Northeastern Extension of Pennsylvania Turnpike in Taylor Borough, city of Scranton and Ransom Twp., beginning at point approx. 643 lin. ft. southeast of center line intersection with Legislative Rte. 35055 at Turnpike Station 140 plus 33.27 in Taylor Borough; northeasterly direction 23,926 lin. ft. more or less through an equality to Turnpike Station 379 plus 75 at point approx. 738 lin. ft. southwest of center line intersection with existing Legislative Rte. 952 in city of Scranton distance of approx. 4.53 mi.; adv. ENR 9/22. CD 10/28/53.

† **N. Y., Niagara Falls**—OPERATION AND TRAINING BLDG.—BA On Or About 10/18—U. S. Eng., 111 E. 16 St., New York, Zone 3, operation and training bldg., Air National Guard facilities (FY 1955) Niagara Air Force Base, ENG-30-075-56-125. $500,000-$750,000. Plans deposit $20.

BUILDINGS—BA

Pa., Feasterville — SCHOOL — BA 9/29 — State Pub. School Bldg. Auth., 101 S. 25 St., Harrisburg, Lower Southampton Elementary School No. 2 for State Pub. School Bldg. Auth., 101 S. 25 St., Harrisburg and Lower Southampton Twp. Bd. Educ., Langhorne, Pa. $420,000, Haag & D'Entremont, Jenkintown, archts. CD 3/17.

▲ **N. J., Princeton**—HOUSING—BA 10/1—Institute of Advanced Study, Olden Lane, 20 buildings, incl. 109-units of housing, $1,000,000. Marcel Breuer, 113 E. 37 St., New York, N. Y., archt.

N. Y., Brooklyn—SPRINKLER SYSTEM—BA 10/6—Henry A. Cohen, dir., Bureau Contracts & Accounts, The Gov. Alfred E. Smith State Office Bldg., Albany, installing sprinkler sys., Bldgs. Nos. 2, 3 and 24, Brooklyn State Hospital. Plans deposit $5.

N. Y., Buffalo—STOREHOUSE AND BAKERY—BA 10/6—Henry A. Cohen, dir., Bureau Contracts & Accounts, The Gov. Alfred E. Smith State Office Bldg., Albany, constr., heating, sanitary, electric, electric elevator, refrigeration and equip. work for storehouse and bakery bldg., incl. service connections Buffalo State Hospital. Plans deposit $50 constr., htg. and sanitary $15 each, electric and refrigeration $20 each, elevator $5, equip. $10. CD 6/19/44.

PROJECTS COVERED

By Size

Construction projects here reported cover the United States and Canada, are of these minimum sizes or larger: water supply, earthwork, waterways $44,000; other public works $73,000; industrial buildings $93,000; other buildings, $344,000. Also Foreign projects of $100,000 and more in size of interest to American contractors.

By Regions & Classes of Construction

(In order of Listings)

BIDS ASKED
LOW BIDDERS
CONTRACTS AWARDED
New England
Middle Atlantic
South
Middle West
West of Mississippi
Far West

PROPOSED WORK
Water Supply
Sewers, Waste Disposal
Bridges
Streets & Roads
Earthwork, Waterways
Public Buildings
Mass Housing
Commercial Buildings
Industrial Buildings
Unclassified

In These Stages

PROPOSED WORK: Before and including appointment of engineers or architects.
BIDS ASKED: BA (new announcements only). For full calendar, see also preceding issues.
LOW BIDDERS: LB On jobs below $500,000 in value all low bidder news will be the final reports published on the projects involved except where award is not made to the low bidder. In this case, a supplementary contract award report will be published.
CONTRACTS AWARDED: CA Except awards to low bidders previously reported in low bidder stage.

CD dates shown are of Construction Daily issue in which last previous report was published.

Symbols and Abbreviations Include:

† Federal Government
▲ Project of $1,000,000 or over.
ENR Engineering News-Record
CD Construction Daily

For additional reports see Construction Daily.

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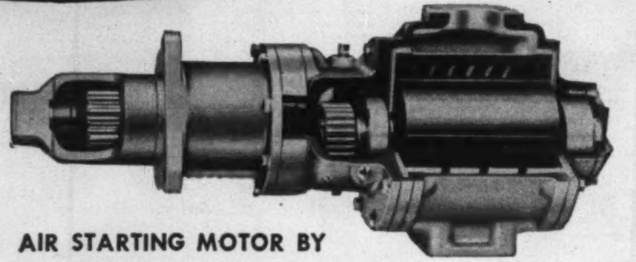

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Structures
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Tinney Drilling Co.
Grafton, W. Va.

▲ **N. J., Princeton**—LIBRARY—Bids Asked—Princeton Theological Seminary, Mercer St. (selected list of bidders) Robert Speer Memorial Library, $1,500,000. George T. Licht and O'Connor & Kilham, 101 Park Ave., New York, N. Y., archts. CD 3/21.

Pa., Phila.—HOME—Bids Asked—Stickle Asoc., archts., 125 City Line Ave., Bala Cynwyd, Home for the Aged for Sacred Heart Manor, 6445 Germantown Ave., Phila., Pa. $670,000. CD 5/6.

HEAVY CONSTRUCTION—LB & CA

▲† **Arundel Corp.**, foot of Fulton St., Brooklyn, N. Y. CA **$1,936,930.** (2 bidders) dredging and rock removal to depth of 37 ft. below mean low water involving removal approx. 133,800 cu. yd. ledge rock, 61,100 cu. yd. from New York and New Jersey Channels Sect. 4, Rock Area 9, Middlesex Co., N. J. and Richmond Co., N. Y. CIVENG-30-075-56-9, NEW YORK and NEW JERSEY. U. S. Eng., 111 E. 16 St., New York 3, N. Y. CD 9/1, under LB.

† **Joseph Halpern**, 34-12 Ninth St., Long Island City, N. Y. LB **$949,972.** (5 bidders) Special AAA Facilities Amherst (Millersport), NEW YORK. U. S. Eng., 111 E. 16 St., New York 3, N. Y. Bids Sept. 6. CD 8/12.

▲ **Harris Structural Steel Co.**, 419 Fourth Ave., New York 10, N. Y. CA **$1,920,700.** Contr. No. 650.009 and Contr. 650.015 structural steel, New York International Airport, IDLEWILD, N. Y. Port of New York Auth., 111 8th Ave., New York 11, N. Y. CD 9/1, under LB.

Lehigh Structural Steel Co., 17 Battery Place, New York 4, N. Y. LB **$908,200.** (2 bidders) Contr. P-148, furnishing, fabricating erecting structural steel for 74 Street Power Plant, NEW YORK, N. Y. New York City Transit Auth., 370 Jay St., Brooklyn 1, N. Y. Bids Aug. 19. CD 7/28.

Federal Pacific Electric Co., 50 Paris St., Newark 1, N. J. LB **$921,811.** Contr. 2, main and auxiliary power equip., for 74 Street Power Plant and 75 Street sub-station, Contr. P-150, NEW YORK, N. Y. New York City Auth. 370 Jay St., Brooklyn 1, N. Y. Bids Aug. 12. CD 7/13.

Horn Constr. Co., Inc., 2174 Hewlett Ave., Merrick, N. Y. LB **$468,275.** Harlem River Drive Imprvt., 125 to 132 Sts., Contr. No. 125-B, foundations and ramps, 127 Street overpass, etc., NEW YORK, N. Y. President Manhattan Boro, Municipal Bldg., New York 7, N. Y. Bids Sept. 9. CD 8/25.

NEW JERSEY—New Jersey Turnpike Auth., Administration Bldg., New Brunswick,

Louis Zimmerman, Jr., 278 Hillside Ave., Hillside, N. J., LB, **$624,045** (4 bidders) Contract No. 114, misc. grading, drainage, paving at Elizabeth Interchange, Maintenance Area No. 5, Service Area 11N and the Jersey City Interchange on N. J. Turnpike, Union and Essex Counties.

▲ **Verona Constr. Co., Inc.**, 251½ Grove Ave., Verona, N. J., CA, **$4,176,308** metal pipe, Contract 9A, easterly section of main trunk sewer, incl. 23,577 lin. ft. 66 and 84 in. sewers, 4907 lin. ft. connections, all appurtenances, NEW BRUNSWICK, N. J. Middlesex County Sewerage Auth., 103 Bayard St., New Brunswick, N. J. Bids June 10. CD 6/17, under LB.

▲ **Berlanti Constr. Co.**, 15 Oakland Ave., Harrison, N. Y., CA, **$2,364,000** metal pipe, Contract No. 9, westerly section of main trunk sewer, NEW BRUNSWICK, N. J. Middlesex County Sewerage Auth., 103 Bayard St., New Brunswick, N. J. Bids June 7. CD 6/9, under LB.

▲ **J. Rich Steers, Inc.**, 17 Battery Pl., New York, N. Y., CA, **$3,468,000** corrugated metal pipe, Contract 12, outfall sewers, water mains, access road, appurtenances, NEW BRUNSWICK, N. J. Middlesex County Sewerage Auth., 103 Bayard St., New Brunswick, N. J. Bids May 20. CD 5/26, under LB.

▲ **Elmhurst Contg. Co. & Charles F. Vachris Co.**, 9024 Ditmas Ave., Brooklyn, N. Y., CA, **$1,677,206** steel pipe Contract 10, South River Interceptor, NEW BRUNSWICK, N. J. Middlesex County Sewerage Auth. 103 Bayard St., New Brunswick, N. J. Bids May 27. CD 6/3, under LB.

▲ **Thompson Starrett Co. Inc.**, 254 W. 54 St., New York, N. Y., CA, **$1,999,912**, Contract 15, central treatment plant, NEW BRUNSWICK, N. J. Middlesex County Sewerage Auth., 103 Bayard St., New Brunswick, N. J. Bids June 3. CD 6/9, under LB;
Oltmer Iron Works, 327 Manhattan Ave., Jersey City, N. J., CA, **$470,712** Contract 15A, structural steel and misc. iron (New Brunswick, N. J.);
Municipal Service Co., 4625 Roanoke Rd., Kansas City, Mo., CA, **$1,285,697**, Contract 15B plumbing gas fitting, process piping and pumping (New Brunswick, N. J.).
Standard Electric Constr. Co., 664 Broadway, Bayonne,, N. J., CA, **$347,229**, Contract 15D, electrical work (New Brunswick, N. J.).

▲ **PENNSYLVANIA**—State Hy. Dpt., 506 North Office Bldg., Harrisburg,

James D. Morrissey, Inc., 9119 Frankford Ave., Phila. 14, Pa. CA **$1,349,760.** constr. existing pavement in left and right outer driveways with plain cement concrete base bit. surf. 34 ft. wide on Roosevelt Blvd. between Oxford Circle and Pennypack Circle, city of Philadelphia, T.R. U.S. 1, Philadelphia Co. CD 8/31, under LB.

▲ **PENNSYLVANIA**—State Hy. Dpt., 506 N. Office Bldg., Harrisburg,

Pa.—**M & S Constr. Co., Inc.**, 1558 Electric Ave., East Pittsburgh, Pa. LB **$1,477,298.** constr. 37,379 ft. conc. pavement variable in width, one I-beam bridge Ridgeway and Johnsonburg Boros, Ridgeway Twp., T. R. 219, Elk Co.;

Pa.—Allegheny Contg. Industries, Inc., 801 Bingham St., Pittsburgh 3, Pa. LB **$693,352.** constr. 21,792 ft. crushed aggregate base with bit surf. 22 ft. wide Karthaus Twp., L. R. 17068 (3), 17069 (1), Clearfield Co.;

Pa.—**J. Paul Laubach**, P. O. Box 68, Benton, Pa. LB **$665,111.** wid'n., overlaying 32,094 ft. existing pavement with crushed aggregate base, bit. surf. 22 ft. wide Columbia and South Creek Twps., T. R. 14, Bradford Co.;

Pa.—**Fred W. Ewing, Inc.**, 405 W. Main St., Corry, Pa. LB **$559,162.** wid'n., overlay 39,051 ft. with crushed aggregate base, bit. surf. 22 ft. wide, Freehold and Pittsfield Twps., T. R. 6, Warren Co.;

Pa.—**Broman Constr. Co.**, P. O. Box 586, Clarion, Pa. LB **$478,723.** wid'n., 30,779 ft. existing road with crushed aggregate base, surf. new base and existing pavement with bit. surf. variable in width Glasgow and Midland Boros, Ohio and Industry Twps., T.R. 68, Beaver Co.;

Pa.—**Ralph V. Daniels, Inc.**, 338 N. 29 St., Camp Hill, Pa. LB **$367,316.** wid'n., 20,905 ft. existing road with crushed aggregate base, bit. surf. variable width, Muncy and Fairfield Twps., Montoursville Boro, T.R. 220-14, Lycoming Co.;

Pa.—**Merraro & Fewins**, 323 Charles St., Luzerne, Pa. LB **$148,928.** constr. 8,307 ft. crushed aggregate base with bit. surf. 24 ft. wide, city of Nanticoke, Warrior Run Boro, Hanover Twp., L.R. 40036 (9), Luzerne Co.;

Pa.—**Kingston Contg. Co.**, West Point, Pa. LB **$209,424.** constr. 3,821 ft. plain c. conc. base with bit. surf. variable width Allentown, T.R. 29-309, Lehigh Co.;

Pa.—**Union Paving Co.**, 1227 N. Broad St., Phila. 22, Pa. LB **$90,226.** surf. 5,347 ft. existing pavement with bit. surf. variable width Philadelphia, L.R. 67025 (3), Philadelphia Co. Bids Sept. 9. CD 8/16 and 8/12.

Marble Mausoleum Co., P.O. Box 3057, South Austin Station, Austin, Tex. CA Est. **$350,000.** general contract 1 story, 50x150 ft. mausoleum, NEW BRIGHTON, PA. Grove City Memorial Div. of New Brighton Cemetery, New Brighton, Pa. Burnes Roensch & Co., 1138 Basse Rd., San Antonio, Tex., archts. Eckles Eng. Co. 621 Greer Blvd., New Castle, Pa., struct. engr.

Square Constr. Co., 115 S. Haven St., Baltimore, Md. LB **$714,500.** furnishing, installing 48 in. Canton transmission main, BALTIMORE, MD. City, Bureau Water Supply, 503 Municipal Bldg., Baltimore 2, Md. Bernard L. Werner, c/o owner, water engr., Bids Sept. 7, CD 8/25;
John Matricciani Co., Inc., 408 S. Caroline St., Baltimore, Md. LB **$246,642.** imprv. Guilford Pumping Station, misc. changes, installing two new 25 M.G.D. pumps, (Baltimore, Md.).

BUILDINGS—LB & CA

Sylvia Manor, Inc., 582 Merrick Ave., East Meadow, N. Y. Owner Builds. **$750,000.** 6 story APARTMENT, 2951 Ocean Ave., BROOKLYN, N. Y. CD 6/1.

▲ **Arthur G. McKee & Co.**, 2300 Chester Rd., Cleveland, O. CA Est. **$5,000,000.** 9,000 bbl. per day CATALYTIC REFORMING UNIT, BUFFALO, N. Y. Socony Mobile Oil Co., Inc., 26 Broadway, New York, N. Y.

▲ **Town Leasing Corp.**, c/o George Miller, archt., 125 W. 45 St., New York 19, N. Y. Owner Builds. **$1,250,000.** 6 story APARTMENT, 80 St. north of 45 Ave., ELMHURST, N. Y. CD 5/12.

Prudential Homes, c/o B. R. Levinson, archt., 167-16 Hillside Ave., Jamaica, N. Y. Owner Builds. **$400,000.** 40 HOUSES, 76 Rd. between 147 and 150 Sts., FLUSHING, N. Y.

▲ **Nicholas Piccione**, c/o Herman H. York, archt., 90-04 161 St., Jamaica, N. Y. Owner Builds. **$3,500,000.** 140 HOUSES on tract bounded by Deer Park Ave. and Vanderbilt Parkway, HUNTINGTON, N. Y.

▲ **Village Leasing Corp.**, c/o George Miller, 125 W. 45 St., New York 19, N. Y. Owner Builds. **$1,000,000.** 6 story APARTMENT, 80 and 45 Sts., JACKSON HEIGHTS, N. Y. CD 7/14.

▲ **James King & Son, Inc.**, 350 Fifth Ave., New York 1, N. Y. CA Est. **$1,000,000.** 2 and 3 story CONVENT of St. Ursula, North Ave., NEW ROCHELLE, N. Y. Ursuline School, 1354 North Ave., New Rochelle, N. Y. Voorhees, Walker, Smith & Smith, 101 Park Ave., New York 17, N. Y., archts. Bids June 21.

▲ **Joseph P. Blitz, Inc.**, 1 E. 57 St., New York, N. Y. CA Est. **$12,500,000.** Morningside-Manhattan HOUSING, Broadway, LaSalle St., Amsterdam Ave. W. 123 and 124 Sts., NEW YORK, N. Y. Columbia University Bernard College, Corpus Christi Church, International House, Jewish Theological Seminary, Julliard School of Music, Riverside Church, Union Theological Seminary, c/o Skidmore, Ownings & Merrill, archts., 585 Madison Ave., New York, N. Y. CD 10/2/51.

▲ **H. R. H. Constr. Corp.**, 16 W. 46 St., New York 19, N. Y. CA Est. **$2,000,000.** 18 story OFFICE, 2nd Ave., 42 and 43rd Sts., NEW YORK, N. Y. Urban Housing Associates, 16 W. 46 St., New York 19, N. Y., Pomerance & Breines, 33 W. 46 St., New York, N. Y., archts. Seeley, Stevenson, Value & Knecht, 101 Park Ave., New York 17, N. Y., engrs. CD 6/20, under CA.

▲ **Country Ridge Estates**, c/o M. Shapiro, Ridge St., Rye, N. Y. Owner Builds. **$12,000,000.** 300 HOUSES, on 165 acre tract on Ridge St. and Hutchinson River Parkway, RYE, N. Y.

▲ **Sherwood Lawns Homes**, c/o Par-Sen Realty Corp., 70 W. Montauk Hy., Lindenhurst, N. Y. Owner Builds. **$2,350,000.** 180 HOUSES on 60 acre tract on east side of Higbie Lane north of Sunrise Hy., WEST ISLIP, N. Y.

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TEMPLETON, KENLY & CO. Broadview, Illinois
2553 Gardner Road

219, Elk Co.;

▲ **Wark & Co.**, 1920 Sansom St., Phila., Pa., CA, Total Est. **$5,000,000** design and construct 4 story, 65,000 sq. ft., stel, concrete FACTORY, incl. 12 new loading docks on Front St. between Arch and Market Sts., CAMDEN, N. J. Campbell Soup Co., 100 Market St. Camden, N. J. CD 3/10/54.

Claridge Manor Homes, c/o William G. Chirgotis, archt., 968 Stuyvesant Ave., Union, N. J. Owner Builds, **$900,000.** 56 HOUSES on tract at Cherry Tree Farm Rd. and Harmony Rd., near Route 35, MIDDLETOWN, N. J.

▲ **Treliss Realty Corp.**, Att. Sol Punia, Yardville, N. J., Separate Contracts. **$4,000,000.** RESIDENTIAL DEVELOPMENT, Hamilton Twp., TRENTON, N. J.

▲ **John Kuria Jr.**, 319 Merchant St., Ambridge, Pa. Separate Contracts. Est. **$1,800,000.** one hundred and thirty-five 1 and 1½ story, bsmnt., brick veneer RESIDENCES, BADEN, PA. Kiballa Plan Service, Box 123, Large, Pa., designer.

▲ **Griffith & Shedler**, 5337 Springfield Rd., Clifton Heights, Pa. Separate Contracts. **$1,250,000.** RESIDENTIAL DEVELOPMENT, Meetinghouse Rd., BOOTHWYN, PA. George Hay, Lima, Pa., archt.

Lewis Calabrese, Jr., 2219 Steele Rd., Drexel Hill, Pa. CA **$400,000.** RESIDENTIAL DEVELOPMENT, Percomac Park Village, COLLEGEVILLE, PA. Owner, c/o contractor.

Lewis Calabrese, Jr., 2219 Steele Rd., Drexel Hill, Pa. Separate Contracts. **$400,000.** RESIDENTIAL DEVELOPMENT, Percomac Park Village, COLLEGEVILLE, PA.

▲ **Murdoch Farms**, c/o Irvin Michaelson, archt., Fox Bldg., Phila., Pa. Separate Contracts. **$1,500,000.** RESIDENTIAL DEVELOPMENNT, Rte. 100 vicinity, LIONVILLE, PA.

Raymond Hedden, Nanticoke, Pa. LB **$465,400.** JUNIOR-SENIOR HIGH SCHOOL, MILFORD, PA. Delaware Valley Joint School Bd., Milford, Pa. Clarence Wagner, 312 Lycoming St., Williamsport, Pa., archt.

▲ **R. S. Noonan, Inc.**, 25 N. Duke St., York, Pa. CA **$1,025,290.** 2 and 3 story, alum sandwich panel and masonry walls, 151,000 sq. ft. paper MILL, steam and power facilities, water storage, site preparation, railroad facilities, SPRING GROVE, PA. P. H. Glatfelter Co., Spring Grove, Pa. J. E. Sirrine Co., 215 S. Main St., Greenville, S. C., engr.

John P. Hallahan Co., 10 S. 18 St., Phila., Pa. CA **$500,000.** RESIDENTIAL DEVELOPMENT, Rte. 322, WEST CHESTER, PA. Owner, c/o contractor.

▲ **Albert P. Mandes**, Berwyn, Pa. Separate Contracts. **$3,000,000.** RESIDENTIAL DEVELOPMENT, Willistown Twp., WILLISTOWN, PA.

▲ **Baltimore Contractors, Inc.**, 711 S. Central Ave., Baltimore 2, Md. LB **$1,294,800.** brick, concrete, steel, stone Har Sinai RELIGIOUS CENTER, BALTIMORE, MD. Har Sinai Congregation of Baltimore, 6300 Park Heights Ave., Baltimore 15, Md. Buckler, Fenhagen, Meyers & Ayers, 24 and St. Paul Sts., Baltimore 18, Md., archts.

Merrimack Engineering Corp., 4916 Del Ray Ave., Bethesda, Md. Owner Builds. **$968,000.** 44 brick detached HOMES, Sect. II, Merrimack Park, BETHESDA, MD. Arthur P. Becker, 4916 Del Ray Ave., Bethesda, Md., archt.

▲ **Blake Constr. Co., Inc.**, 33 E. St. S. W., Wash., D. C. LB **$2,402,000.** Chronic disease HOSPITAL, HAGERSTOWN, MD. State, Dpt. P. Imprvts., 506 Park Ave., Baltimore 1, Md. Bids Sept. 9. CD 8/30.

Wildberger Best Constr. Co., 2025 E. North Ave., Baltimore 13, Md. CA **$769,800.** Middlesex Elementary SCHOOL, South of Marlyn Ave. and Bennett Rd., Essex, TOWSON, MD. Baltimore Co. Bd. Educ., Aigburth Rd., Towson, Md. CD 8/23, under LB.

▲† **George Hyman Constr. Co.**, 1010 Vermont Ave. N. W., Wash., D. C., CA, **$17,200,000.** 7 story, superstructure U. S. Senate OFFICE Bldg., First St. between Constitution Ave. and C St., N. E., WASH., D. C. Office of the Architect, U. S. Capitol, Wash., D. C. Bids Sept. 2 awarded Sept. 9. CD 9/7, under LB.

SOUTH

HEAVY CONSTRUCTION—BA

STATE HIGHWAY LETTINGS

BRIDGES

September 27 North Carolina

STREETS AND ROADS

September 27 North Carolina

▲† **Georgia**—BA 10/4—U. S. Eng., 200 East St. Julian St., P.O. Box 889, Savannah, earth embankments, Hartwell Proj., Savannah River, Georgia and South Carolina, near Hartwell, Ga., about 7.1 mi. downstream from the confluence of Seneca and Tugaloo Rivers and about 7 mi. east of Hartwell, Ga., Serial No. CIVENG-09-133-56-8. CD 8/24.

▲ **Ky., Louisville**—BA 10/6—Louisville Water Co., S. Third St., Contr. A general constr. Part 1, filter and chemical bldg. addn.; Part 2, tunnel constr.; Contr. B, filter equip.; Contr. C, chemical conveying equip. Plans deposit $15. Alvord, Burdick & Howson, 20 N. Wacker Drive, Chicago 6, Ill., engrs.; adv. ENR 9/22. CD 8/9.

† **Kentucky**— BA 10/20—U. S. Eng., P. O. Box 59, Louisville, Zone 1, constr. outlet works, Rough River Reservoir incl. rein.-con. control tower, control gates with appurtenant hydraulic controls, structural steel service bridge, 1.6 mi. access road, CIVENG-15-029-56-21. CD 8/19.

BUILDINGS—BA

▲ **Ga., Milledgeville**—HOSPITAL, etc.—BA 10/4—Dpt. Public Welfare, State Office Bldg., Atlanta, Powell Bldg., addns., alterations at State Hospital. $1,500,000. Plans deposit $50. Albany Architects & Engineers, 200½ Broad Ave., Albany, archts. CD 8/22.

Ky., Murray—DORMITORY—BA 10/20—State Div. Purchase, Frankfort, women's dormitory, at Murray State College, $900,000.

HEAVY CONSTRUCTION—LB & CA

Blythe Bros. Co., Inc., 2911 Hutchinson Ave., Charlotte, N. C., CA **$615,033,** Cross Line Railway, bridges, etc. roadway RR; Irwin Creek RR bridge; York Rd. Hy. Bridge; Steel Creek Hy. Bridge; Dixie Rd. Hy. Bridge, CHARLOTTE, N. C. City, City Hall, Charlotte, N. C. Frank T. Miller, 109-A W. Gaston St., Greensboro, N. C., engr. Bids Sept. 1. CD 7/5/50.

Lee Constr. Co., 311 W. Worthington Ave., Charlotte, N. C., CA **$727,648,** water treatment plant alterations, addns., ROCKY MOUNT, N. C. City, Rocky Mount, N. C. Bids Aug. 17. CD 7/27.

▲† **F & C Engineering Co.**, Box 2426, Houston, Tex. CA **$9,892,629.** Low Sill structure, Old River Control Concordia Parish, Inv. 56-2, LOUISIANA. U. S. Eng., foot of Prytania St., New Orleans, La. CD 8/30, under LB.

BUILDINGS—LB & CA

▲ **Luria Brothers**, 2048 Wilson Blvd., Arlington, Va., CA **$1,216,000,** 64 brick detached HOMES, Shreve Rd., FAIRFAX, VA. Contemporary Homes, Inc., 2048 Wilson Blvd., Arlington, Va. Walton Associates, 2049 North 15 St., Arlington, Va., archts.

McDevitt & Street Co., Builders Bldg., Charlotte, N. C., LB **$719,137,** SHOPPING CENTER, CHARLOTTE, N. C. Park Road Shopping Center, Inc. & Southeastern Realty Co., c/o R. Emory Holroyd, Jr., archt. 831 E. Morehead St., Charlotte, N. C. Bids Aug. 26.

▲ **Daniel Constr. Co.**, 429 N. Main St., Greenville, S. C. CA Est. **$3,000,000.** textile finishing PLANT, CARLISLE, S. C. Cone Mills, Inc., Southeastern Bldg., Greensboro, N. C. J. E. Sirrine Co., 215 S. Main St., Greenville, S. C., engr.-archt.

John C. Heslep Co., S. C. Natl. Bank Bldg., Columbia, S. C., CA **$572,875,** addnl. classrooms, gymnasium for Brookland-Cayce HIGH SCHOOL, CAYCE, S. C. Cayce School Bd., Cayce, S. C. CD 1/4/52.

Morris Constr. Co., News Bldg., Greenville, S. C., CA, **$711,385,** Travelers Rest HIGH SCHOOL, GREENVILLE, S. C. Bd. Trustees Greenville Co. School Dist. 520, Greenville, S. C. Bids July 12. CD 7/20, under LB.

Smith & Jones, 936 W. Peachtree St., Atlanta, Ga., LB **$960,000,** Franklin County Elementary and High School; Franklin County Elementary and High Trade School; Royston Elementary and High School addn.; Lavonia Elementary and High School addns.; Canon Elementary and Red Hill Elementary School in Franklin Co.,CARNESVILLE, GA. State School Bldg. Auth., Kemper Bldg., Atlanta, Ga. Bids Sept. 7. CD 8/5.

▲ **Southern Builders, Inc.**, Box 1815, Shreveport, La. CA **$1,000,000.** masonry CHURCH, SHREVEPORT, LA. Highland Baptist Church, 520 Olive St., Shreveport, La. Awarded Sept. 6. CD 2/15.

Southern Builders, Inc., Box 1815, Shreveport, La. CA **$725,000.** Negro Elementary SCHOOL, Holzman and Patsman Sts., SHREVEPORT, LA. Caddo Parish School Bd., Shreveport, La. Awarded Sept. 7. CD 9/9, under LB.

▲ **J. A. Jones Constr. Co.**, 209 W. 4 St., Charlotte, N. C. CA **$1,300,000.** (9 bidders) 1 story, 112,000 sq. ft. electronic tube mfg. PLANT, OWENSBORO, KY. General Electric Co., River Rd., Schenectady, N. Y. Bids Aug. 31, awarded Sept. 8. CD 8/15.

J. A. Jones Constr. Co., 133 Ellis St. N. E., Atlanta, Ga., LB **$728,380,** 5 story DOCTORS BLDG., CHATTANOOGA, TENN. Allan-Grayson Realty Co., 30 Pryor St. N. E., Atlanta, Ga. Toombs, Amisano & Wells, 127 Walton St., Atlanta, Ga., archts.

▲ **Buchi Plumbing Co.**, 220 12 Ave. N. Nashville, Tenn., CA **$725,031,** installing heating, ventilating and air conditioning for new 30 story OFFICE, NASHVILLE, TENN. Life & Casualty Insurance Co., 159 4 Ave. N., Nashville, Tenn. Awarded Sept. 6, CD 6/10/54;
Sadler Electric Co., 4407 Charlotte St., Nashville, Tenn., CA **$464,705,** installing electrical wiring and equipment (Nashville, Tenn.).

▲ **Thompson & Street Co.**, Pineville Rd., Charlotte, N. C., CA **$5,000,000.** substructure for new glass mfg. PLANT, near NASHVILLE, TENN. Ford Motor Co., 3000 Schaefer St., Dearborn, Mich. Awarded Sept. 6, CD 7/20;
Ingalls Steel Constr. Co., 620 4 Ave. S., Birmingham, Ala., CA **$2,500,000.** fabrication and erection of 7,000 tons steel in conjunction with substructure. (Nashville, Tenn.).

MIDDLE WEST

HEAVY CONSTRUCTION—BA

† **O., Dayton**—DORMITORIES—BA 9/27—U. S. Eng., 830 Broadway, Louisville, Ky., three 3 story, 25,860 sq. ft. airmen dormitories. $700,000. CD 9/7, under LB.

Mich., Pleasant Ridge—BA 9/28—Southeastern Oakland County Water Auth., 23646 Woodward St., Contr. 9, 57x84 ft. brick, steel, steel panel constr. pumping station rein.-con. base, Webster Rd., Royal Oak. Plans deposit $25, refundable, Ayres, Lewis, Norris & May, 500 Wolverine Bldg., Ann Arbor, engrs. CD 11/18.

O., New Richmond—BA 10/4—City, sanitary sewers, treatment plant, 1 story, brick, bsmnt., filter beds, $450,000, Al. LeFeber & Assoc., Woodburn Ave., Cincinnati, engrs. CD 8/18.

Mich., Centreville—BA 10/6—Village, William E. Carrico, clk., well pump, motors and controls, pumphouse and equip., 20 valves, 14 hydrants, 11,366 ft. 4- to 8-in. c.i. water mains. Plans deposit $20, refundable, Thomas A. Webb, Centreville, engr.

INDIANA—BA 10/11—Indiana Toll Road Comn., 309 W. Washington St., Old Trails Bldg., Indianapolis, Zone 4,

Lake Co.—Contract C-1A, grading, drainage, structures, paving, roadway lighting of approx. 0.6 mi. in Construction Section C-1A of Indiana-East-West Toll Road beginning at Indiana-Illinois State Line at Toll Road Centerline Station 234 plus 11.08 and extending southeasterly to point about 1,900 ft. south of point on centerline of Indianapolis Boulevard at Toll Road Centerline Station 264 plus 00. Plans deposit $5 for standard specifications; $25 for plans, special provisions and proposal forms per set, per construction section. H. D. Hartman, ch. engr., adv. ENR 9/22. CD 2/10/54.

▲ **Wis., Milwaukee**—BA 10/19—City, City Hall, double bascule bridge over the Kinnickinnic River at S. 1 St., $1,000,000. Plans deposit $10. Lloyd D. Knapp, city engr. Geo. C. Ashton, br. engr. CD 8/25/54.

BUILDINGS—BA

▲ **Ill., Centreville Twp. (East St. Louis, P. O.)**—HOSPITAL—BA 9/27—Centreville Township Hospital Bd., Francis Touchette, chn., City Hall, 4831 Bond Ave., Centreville Twp., East St. Louis, 3 story, ground floor, 56x320 ft. and 56x80 ft. brick, steel, rein.-con. hospital. $2,500,000. Charles B. Spencer & Joseph D. Standish, assoc. archts., 1101 Spivey Bldg., 417 Missouri Ave., East St. Louis, Ill. Extended date. CD 6/7.

▲ **Mich., Harper Woods**—SCHOOL—BA 9/27—City, Bd. Educ., Harold Butler, secy., 20225 Beaconsfield St., Junior High School, $1,500,000. Plans deposit $25, refundable, Clair W. Ditchy, 605 W. 11 Mile Rd., Royal Oak, archt. CD 8/22.

Mich., Van Dyke—SCHOOL—BA 9/29—Warren Twp. Bd. Educ., School Dist. 5, Violet Carrier, secy., 22100 Federal Ave., Jesse P. Wolcott Elementary and Junior High School, Warren. Plans deposit $25, refundable. Earl G. Meyer, 806 Farwell Bldg., Detroit, archt.

Mich., Boyne City—GARAGE—BA 10/5—Rd. Comrs. Charlevoix Co., Karl J. Erber, chn., maintenance garage. Plans deposit $10, no refund. The Scott Eng. Co., 405 River St., Alpena, engr.

▲ **Mich., Detroit**—SCHOOL—BA 10/5—City, Bd. Educ., 1354 Broadway, (1st unit) Henry Ford High School, West Side, $1,700,000, Total est. $5,000,000, Giffels & Vallet, Inc., 1000 Marquette Bldg., Detroit, archt. CD 1/13.

HEAVY CONSTRUCTION—LB & CA

† **Great Lakes Dredge & Dock Co.**, Williamson Bldg., Cleveland 14, O. LB **$572,300,** est. $496,720. maintenance dredging in Old River Bed and Cuyahoga River, Cleveland, Cuyahoga Co., OHIO. U. S. Eng., Engineer Park, Buffalo 7, N. Y.

Carl M. Geupel, 1919 N. Meridian St., Indianapolis, Ind., LB, **$797,900** refuse incinerator and auxiliaries, 55-S-27-MH, INDIANAPOLIS, IND. Bd. Sanitary Comrs., Indianapolis Sanitation Dist. 421 N. Pennsylvania St., Indianapolis, Ind. Bids Sept. 8. CD 8/18.

▲ **Fischer-Stoune, Inc.**, Citizens Bldg., Decatur, Ill., CA, **$1,440,000,** Divisions A, B, C, D, E, F, G, H, I, and K, water filtration and pumping plant addns., expansion, and imprvs., Proj. 11-54, DECATUR, ILL. City County, County Bldg., Decatur, Ill. Bids Aug. 8, awarded Aug. 25. CD 8/31, under LB.

▲ **WISCONSIN**—State Hy. Comn., State Hy. Office Bldg., Madison.

Wis.—**Badger State Constr. Co.**, 3140 W. Fond du Lac Ave., Milwaukee, Wis., LB, **$173,411,** (9 bidders). Contract No. 1, Structure B-40-25, U. S. Hy. 141, Proj. F 077-1 (3) Milwaukee Co.;

Wis.—**C. R. Meyer & Sons Co.**, 50 State St., Oshkosh, Wis., LB, **$936,461,** (1 bidder) Contract 1, structure, approaches 0.141 mi. U. S. Hy. 45, Proj. T 5901 (1) Winnebago Co. Bids Sept. 8. CD 8/26.

▲ **WISCONSIN**—State Hy. Comn., State Office Bldg., Madison,

Wis.—**Fluor Bros. Constr. Co.**, 48-52 Otter St., Oshkosh, Wis., CA, **$659,627.** grading, base, structures 1.253 mi. U.S. Hy. 16 and S.T. Hy. 30, Proj. I 06-1 (7), Contract 1, Waukesha Co.;

Wis.—**Courtney & Plummer, Inc.**, P. O. Box 791, Neenah, Wis., CA, **$516,440.** base, b. conc. 15.26 mi. S.T. Hy. 110, Proj. 037-1 (5) Contract 1, Winnebago Co. Bids Sept. 8. CD 9/13, under LB.

MICHIGAN—State Hy. Dpt., Stevens T. Mason Bldg., Lansing,

Mich.—**Hodgkiss & Douma**, Petoskey, Mich. LB **$151,725,** est. $160,000. bit. aggregate surf. Class F1 on M-66 and M-32, M 5-21 C5-R, M 15-15 C7-R, etc., Antrim and Charlevoix Counties;

Mich.—**Sugden & Sivier, Inc.**, 13100 Cloverdale St., Oak Park, Mich. LB **$367,713,** est. $420,000. bit. aggregate shoulders Edsel Ford Expressway from Wyoming Ave. to interchange and on John C. Lodge

Expressway from Grand Blvd. to Lafayette, BUI 82-64 C32-UO, BUI 82-65 C13-UO, etc., Wayne Co.;

Mich.—**Cooke Contg. Co.,** 1116 Penobscot Bldg., Detroit, Mich. LB **$229,613,** est. $250,000. binder wid'n., 32 ft. b. conc. US-25 from New Haven to Muttonville, M 50-24 C12-R, Macomb Co.;

Mich.—**Grand Rapids Asphalt Paving Co.,** 341 Market St. S.W., Grand Rapids, Mich. LB **$99,001,** est. $100,000, b. conc. 2.249 mi. M-21 and M-91, F 41-11 C7-U (F 185 12), F 41-11 C6-R (F 185 12), etc., Kent Co. Bids Sept. 7;

Mich.—received no bids Sept. 7, aggregate surf. course wid'n., bit. aggregate surf. Class F1 on drive Veterans Facility, 0.204 mi., MIR 141-103 C2-R, Kent Co. CD 9/2 and 8/26.

J. C. Sachs, 724 Lafayette Bldg., Detroit, Mich. CA **$97,374.** Group 55-6, c. conc. on John Kronk, Ambet and Anson Sts., DETROIT, MICH. City, Glenn C. Richards, comr., 528 City-County Bldg., Detroit, Mich. Bids Aug. 30, CD 8/19;

G. Toccalino & Sons, 17149 Wakendon St., Redford, Mich. CA **$95,059.** Group 55-6, c. conc. (Detroit, Mich.).

▲ **MICHIGAN**—State Hy. Dpt., Stevens T. Mason Bldg., Lansing,

Mich.—**Carl Goodwin & Sons,** Allegan, Mich. CA **$958,200,** est. $980,000. c. conc. 4.29 mi. F 70-41 C5-RN, etc., Ottawa Co.;

Mich.—**Canonie Excavating Co.,** South Haven, Mich. CA **$718,744.** paving 13.177 mi. SS 29-24 C3-R, etc., Gratiot Co. CD 9/2, under LB.

BUILDINGS—LB & CA

▲ **Fairlawn Building & Realty Co.,** 2940 W. Market St., Akron, O. Owner Builds. **$3,500,000.** 90 HOMES, on 30 acre site known as Country Club Estates, facing Greenvale Ave. between Kenilworth Dr. and Portage Country Club, AKRON, O. CD 9/8.

St. James Lumber Co., 3966 W. 25 St., Cleveland 9, O. Owner Builds. **$525,000.** 75 HOMES, Rte. 82 and Chamberlin Rd., AURORA, O. Awarded Aug. 18.

▲ **Hunkin Conkey Co.,** 1740 E. 12 St., Cleveland 14, O. CA Est. **$5,000,000.** 1 story, brick, steel WAREHOUSE and OFFICE on 17 acre site, Five Points Rd., BROOK PARK, O. Goodyear Tire & Rubber Co., 1144 E. Market St., Akron, O. McGeorge, Hargett & Assoc., 7016 Euclid Ave., Cleveland 3, O., archts. Awarded Aug. 25.

St. James Lumber Co., 3966 W. 25 St., Cleveland 9, O. Owner Builds. **$600,000.** 75 HOMES, Sleepy Hollow Rd., BRUNSWICK, O. Awarded Aug. 18.

▲ **Vincent and Herbert Kroeger,** 3730 Feldkamp Ave., Cincinnati, O. Own Forces. **$3,000,000.** 1½ story, bsmnt. 70-HOME addn. to Giffindale Subdivision in White Oak, CINCINNATI, O. Jos. Allen, 4638 Glenway Ave., Cincinnati, O., engr.

Roediger Constr. Co., 1729 Superior Ave., Cleveland 14, O. CA **$806,000.** DORMITORY, CLEVELAND, O. Case Institute of Technology, 10900 Euclid Ave., Cleveland 9, O. Bids Aug. 30, awarded Sept. 8. CD 9/2, under LB.

Dunlop & Johnson, 1950 Lee Rd., Cleveland, O. CA Est. **$550,000.** SCHOOL facing Ignatius Ave. S.W., and enlarge all-purpose parish hall, facing Lorain Ave., CLEVELAND, O. St. Ignatius Church, W. Blvd. S.W. and Lorain Ave., Cleveland, O. Bids Aug. 24. CD 9/9.

▲ **H. K. Ferguson Co.,** 1783 E. 11 St., Cleveland, O. CA **$6,000,000.** design and construct steel truss PLANT expansion, incl. 3 story, besmnt., concrete, masonry office bldg., EUCLID, O. Addressograph Multigraph Corp., 1200 Babitt Rd., Euclid, O.

▲ **Bethlehem Steel Co.,** E. 3 St., Bethlehem, Pa. CA structural steel for ENGINE ASSEMBLY PLANT, northwest of city limits, LIMA, O. Ford Motor Co., 3000 Schaefer St., Dearborn, Mich. CD 6/14;

D. R. Smalley & Son, Celina, O. CA clearing site (Lima, O.).

▲ **Marvin Gross,** 5082 Phillip St., Cleveland. O. Owner Builds. **$3,000,000.** 209 HOUSES, Pleasant Valley Rd. and W. 121 St., PARMA, O.

▲ **Basilo Imbrigiotta,** 5979 Chestnut Hills Dr., Cleveland, O. Owner Builds. **$3,000,000.** 211 HOMES, Bagley and Pleasant Valley Rds., PARMA, O.

▲ **Ed Oswald & Henry Weiss,** 405 46 St., Sandusky, O. Own Forces. **$1,750,000.** 80 HOMES on 43 acre plot, on Perkins Ave. and Milan Rd., SANDUSKY, O.

▲ **Huber Constr. Co.,** 631 E. Stroop Rd., Dayton, O. Owner Builds. **$6,000,000.** 530 HOMES, west edge of city, SIDNEY, O.

▲ **Brauchla Land & Development Corp.,** Fremont, O. Owner Builds. **$11,250,000.** 750 pre-fab. HOMES on 350 acre tract on south side of Pettibone Rd., sanitary sewage treatment plant, SOLON, O. Harold Scott, 6090 S.O.M. Center Rd., Solon, O., consult. engr.

▲ **The Austin Co.,** 510 N. Dearborn St., Chicago, Ill., CA Est. **$1,000,000.** design and construct 40,000 sq. ft. U-shaped, permanent mold aluminum FOUNDRY, Bueter Rd., 80x80 ft., laboratory, shop and office building adjacent to foundry, FORT WAYNE, IND. Zollner Machine Works, Inc., Bueter Rd., Fort Wayne, Ind.

▲ **Joseph Ryan, Builder,** Lemcke Bldg., Indianapolis, Ind., Own Forces, **$2,000,000** or more. HOMES in Roland Park Project, INDIANAPOLIS, IND.

Robert Behrmann Co., 300 S. Belt-W, Belleville, Ill., LB **$956,781,** general contract 2 story, bsmnt., 46x243 ft., and 1 story, part bsmnt., 138x157 ft. brick, concrete, steel HOSPITAL, 4501 North Park Drive, BELLEVILLE, ILL Protestant Hospital Builders Club, Inc., Oliver C. Joseph, pres., 10A W. Washington St., Belleville, Ill. Bids Sept. 8. CD 9/7;

Rust Contg. & Supply Co., Inc., 920 W. A St., Belleville, Ill., LB, **$882,000.** plumbing, heating, ventilating, air-conditioning (Belleville, Ill.).

Oliver L. Parks Realty Co., Inc., 3702 N. Belt West, Belleville, Ill. Owner Builds. **$500,000.** 100 prefabricated RESIDENCES, concrete fdns., in St. Henry Gardens subdivision adjacent to 3700 N. Belt, West and By-Pass U. S. 50, BELLEVILLE, ILL.

▲ **L. J. Graf Constr. Co.,** 6327 N. Crawford St., Chicago, Ill., CA, **$1,000,000.** trucking terminal, CHICAGO, ILL. Gateway Transport Co., 2023 S. Morgan St., Chicago, Ill. Quinn & Christiansen, 134 N. La Salle St., Chicago 2, Ill., archts. Awarded Sept. 8.

▲ **John Griffiths & Sons,** 228 N. La Salle St., Chicago 1, Ill., CA, **$1,000,000.** PHYSICAL EDUCATION BLDG. in Belden Ave. between Sheffield and Kenmore Aves., CHICAGO, ILL. De Paul University, 2235 N. Sheffield Ave., Chicago, Ill. Awarded Sept. 7. CD 3/9.

Lee N. Romano, 7032 W. Belmont St., Chicago, Ill., Own Forces, **$800,000.** 65 HOMES, North Montclair, N. Nottingham, N. Nordicce Sts., CHICAGO, ILL. Raymond A. Peterson, 4014 Dempster Ave., Skokie, Ill., archt.

▲ **Ames Constr. Co.,** 5918 State St., East St. Louis, Ill., CA, **$2,500,000.** 500 RESIDENCES in Parkside Community on State St., adjacent to Grand Marias State Park, EAST ST. LOUIS, ILL. National Homes of East St. Louis, 5918 State St., East St. Louis, Ill.

M. F. Edwards, 5150 S. Avers St., Chicago, Ill., Own Forces, **$900,000.** 50 HOMES, JUSTICE, ILL. H. E. Anderson, 7915 S. State St., Chicago, Ill., archt. Awarded Aug. 30.

▲ **Joseph T. Carp,** 5640 Northwest Highway, Chicago, Ill. CA, **$6,000,000,** 300 HOMES, PALATINE, ILL. Pleasant Hill Builders Corp., Palestine, Ill. A. J. Del Bianco, 5501 W. Irving Park Rd., Chicago, archt. Awarded Aug. 30.

▲ **Paul Constr. Co.,** 106 N. Pierce St., Wheaton, Ill. Own Forces. **$2,000,000.** 94 HOMES, WHEATON, ILL.

▲ **H. K. Ferguson Co.,** 1783 E. 11 St., Cleveland, O. CA **$4,100,000.** underground GARAGE for Grand Circus Park, DETROIT, MICH. City, Municipal Parking Auth., 1214 Griswold St., Detroit, Mich. CD 12/3.

G. R. Holding Corp., 1518 Ford Bldg., Detroit, Mich. Owner Builds. **$650,000.** 5 story APARTMENT, Whitmore Rd., DETROIT, MICH.

▲ **Slavik Builders, Inc.,** 20063 James Couzens Hy., Detroit 35, Mich. Owner Builds. **$4,800,000.** Buckingham Village Development 400 brick HOMES, Inkster and Schoolcraft Section, DETROIT, MICH.

▲ **Slavik Builders,** 20063 James Couzens Hy., Detroit, Mich. CA Est. **$1,400,000.** 110 face brick HOUSES, Rouge Park, Outer Drive-Glendale, FARMINGTON,

only the Littleford "Kwik-Steam" Vapor Generator gives you steam in 2 minutes from a cold start!

"Kwik-Steam" indispensable for Pile Driving

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LITTLEFORD BROS., INC.
415 E. Pearl St., Cincinnati 2, Ohio

QUARTERS, Inv. E-41-133-55-156, FORT SAM HOUS-

Blvd. Trunk Sewer, GARDEN GROVE, CALIF. Garden

MICH. Cox Realty Co. (agent), 20069 James Couzens Hy., Detroit, Mich.

▲ **Darin & Armstrong, Inc.,** 2041 Fenkell St., Detroit, Mich. CA Est. **$1,500,000.** TANK BLDG. addn., GRAND BLANC, MICH. Fisher Body Div. General Motors Corp., General Motors Bldg., Detroit, Mich. Bids July 26. CD 7/15.

▲ **Rose-Hill Builders,** 13324 W. Seven Mile Rd., Detroit, Mich. CA Est. **$3,000,000.** Rosedale Villas, 260 brick, frame HOMES, Joy and Merriman Sts., LIVONIA, MICH. Rose-Hill Realty, 17300 Grand River, Detroit, Mich.

▲ **C. Schuett Realty, Inc.,** 19228 W. McNichols St., Detroit, Mich. Owner Builds. **$1,250,000.** 107 HOUSES, 39 acre site, MILFORD, MICH.

Miller-Davis Co., 1029 Portage St., Kalamazoo, Mich. CA **$842,600.** Barnard Hall women's DORMITORY, Central Michigan College, MOUNT PLEASANT, MICH. State, A. N. Langius, dir. State Bldg. Dpt., Lewis Cass Bldg., Lansing, Mich. Roger Allen & Assoc., 1126 McKay Bldg., Grand Rapids 2, Mich., archts. CD 7/29.

▲ **Green & Sarko, Inc.,** 18107 James Couzens Hy., Detroit, Mich. CA Est. **$2,000,000.** Boulevard Gardens Development, 100 duplex brick HOUSES, PONTIAC, MICH. Rose-Hill Realty Co. (agent), 17300 Grand River, Detroit, Mich.

▲ **Bert Gordon Co.,** 18637 James Couzens Hy., Detroit, Mich. Owner Builds. **$1,750,000.** Parkland Ranch HOMES, Main, Walton and Tienken Rds., ROCHESTER, MICH.

▲ **City,** School Dist., Rochester, Mich., rejected bids Aug. 30. HIGH SCHOOL, ROCHESTER, MICH. Est. **$1,200,000.** CD 8/15.

▲ **S. J. Groves & Sons, Co.,** Wesley Temple Bldg., Minneapolis, Minn. CA Est. **$3,000,000.** Michigan Proving Grounds Five Mile High Speed Track, 2.5 mi. E-W straightaway, test grades and durability loops, ROMEO, MICH. Ford Motor Co., Earle S. MacPherson, vice pres.-engr., 2866 Penobscot Bldg., Detroit, Mich. Smith-Hinchman & Grylls, 800 Marquette Bldg., Detroit, Mich., archts. CD 4/20.

▲ **Indian Hills Estates,** 117 S. Main St., Romeo, Mich. Owner Builds. **$3,750,000.** 250 brick ranch HOUSES, 35 Mile Rd. and M-53, ROMEO, MICH.

Bay Court Constr., 26050 Pinehurst St., Roseville, Mich. Owner Builds. **$900,000.** 52 duplex HOUSES, Marquette and Pinehurst Sts., ROSEVILLE, MICH.

C. R. Meyer & Son Co., 50 State St., Oshkosh, Wis., CA, **$150,000,** 2 story, 60x209 ft., steel, brick, PAPER MILL addn., NEENAH, WIS. Neenah Paper Co., N. Commercial Ct., Neenah, Wis. CD 7/7.

WEST OF MISSISSIPPI

HEAVY CONSTRUCTION—BA

STATE HIGHWAY LETTINGS

BRIDGES
October 4 Kansas

STREETS AND ROADS
September 29, October 4 Kansas

Kan., Lawton—HOSPITAL—BA 9/20—City, city hospital addn. Carlson & O'Brien, 418 Commerce Bldg., Kansas City, Mo., archts.

† **S. D., Rapid City**—RADIO RANGE FACILITY—BA 9/29—Civil Aeronautics Admin., Federal Office Bldg., Kansas City, Mo., radio range facility, Mountain Top V.O.R. 3-56-24.

▲† **New Mexico**—BA 9/30—U. S. Eng., Box 1538, Albuquerque, N. M., Phase III, Rio Grande floodway, reconstr. 18 miles levees, Middle Rio Grande, drainage canal enlargement, etc., near Albuquerque, Serial No. CIVENG-29-005-56-5. $4,000,000. CD 8/31.

Tex. Houston—BA 9/30—Allied Stores Corp., 401 Fifth Ave., New York, N. Y., sanitary-storm sewers, $85,000. Plans deposit $25. Bartlett Cocke, 3501 Broadway, San Antonio, archt. W. E. Simpson Co., 945 Milam Bldg., San Antonio, engr.

Tex., Houston—BA 9/30—Allied Stores Corp., 401 Fifth Ave., New York, N. Y., water sys. $45,000. Plans deposit $25. Bartlett Cocke, 3501 Broadway, San Antonio, archt. W. E. Simpson Co., 945 Milam Bldg., San Antonio, engr.

Tex., Houston—BA 9/30—Allied Stores Corp., 401 Fifth Ave., New York, N. Y., bldg. site and area grading earthwork, filling, leveling. $90,000. Plans deposit $25. Bartlett Cocke, 3501 Broadway, San Antonio, archt. W. E. Simpson Co., 945 Milam Bldg., San Antonio, engr.

Tex., Houston—BA 9/30—Allied Stores Corp., 401 Fifth Ave., New York, N. Y., some warehouse adjacent hard paving and parking area paving for fleet of trucks, etc. $90,000. Plans deposit $25. Bartlett Cocke, 3501 Broadway, San Antonio, archt. W. E. Simpson Co., 945 Milam Bldg., San Antonio, engr.

Minn., Osseo—BA 10/3—Village, R. Setzler, clk., sanitary sewer collection sys., trunk sewer, 2 lift stations, metering station, $300,000. Plans deposit $30. R. D. Thomas & Assoc., 400 Metropolitan Life Bldg., Minneapolis, engrs. CD 7/5/51.

† **Minn., Duluth**—PAVING FACILITIES—BA 10/4—U. S. Eng., 1217 U. S. Post Office & Custom House, St. Paul, Zone 1, paving facilities, Duluth Air Force Base, ENG-21-018-56-4. CD 8/29, under LB.

† **North Dakota**—BA 10/4—U. S. Eng., Riverdale, reservoir clearing, Stage III, Schedule A, Garrison Dam and Reservoir Proj., Mountrail, McKenzie and Williams Counties, CIVENG-32-015-56-20. CD 8/29.

▲ **Neb., Omaha** — BA 10/10 — Metropolitan Utilities Dist., 18 and Harney Sts., demolish existing basins, ex. road work, roads; drain, piping, slug pumps, meters, automatic controls, valves, various piping, electric equip., wiring, etc., chemical solution feed lines, piping outside basins. $1,200,000. J. C. Detweiler, c/o owner, engr. Burns & McDonnell Eng. Co., 95 and Troost Sts., Kansas City, Mo., engr. CD 3/24.

† **Okla., Altus**—LIGHTING—BA 10/5—U. S. Eng., Box 61, Tulsa, Zone 2, taxiway lighting, Altus Air Force Base, ENG-34-066-56-12.

† **N. M., Santo Domingo**—ELECTRICAL WORK—BA 10/6—Bureau Indian Affairs, Dpt. Interior, Box 931, Albuquerque, electrial work, BU 600-200.

† **N. M., Alamogordo**—AIRFIELD LIGHTING—BA About 10/12—U. S. Eng., P.O. Box 538, Albuquerque, airfield lighting Holloman Air Force Base, ENG-29-005-56-22. CD 8/25, under LB.

BUILDINGS—BA

Minn., Brooklyn Center—SCHOOL—BA 9/27—Bd. Educ. Independent School Dist. No. 43, L. Ward, supt., Osseo, Willow Lane Grade School, $375,000. Plans deposit $30, Haarstick, Lundgren & Assoc., N. 212 First National Bank Bldg., St. Paul, archts. CD 6/14.

▲ **Colo., Denver** — AUDITORIUM, etc. — BA 9/30 — Temple Emanuel, E. 16 Ave. and Pearl St., (selected list of bidders) 1 story, 170x180 ft. auditorium and 210x320 ft. classroom and recreational. $1,000,000. Percival Goodman, 19 E. 48 St., New York 17, N. Y., archt. Robert M. Morris, 330 W. Asbury St., engr. CD 11/18/54.

▲ **Tex., Houston**—WAREHOUSE—BA 9/30—Allied Stores Corp., 401 Fifth Ave., New York, N. Y., 219,000 sq. ft., 1 story, rein.-con. warehouse 10-acre tract on Mykawa Rd. $1,750,000. Plans deposit $25. Bartlett Cocke, 3501 Broadway, San Antonio, archt. W. E. Simpson Co., 945 Milam Bldg., San Antonio, engr. CD 8/16.

▲ **Colo., Durango**—ACADEMIC—BA 10/7—State of Colorado, Fort Lewis A & M College, Hesperus, 1 and 2 story, 39,050 ft. academic bldg. and 1 story, 14,050 sq. ft. native stone gymnasium, $1,500,000. James H. Hunter, 2049 Broadway, Boulder, engr.-archt. CD 2/10.

† **Mont., Helena**—ARMORY—BA 10/11—U. S. Eng., City-County Airport, Walla Walla, Wash., 1 story, 7,400 sq. ft. rein.-con., frame reserve armory with utilities for Army Reserve Training Center, Inv. 56-9. Extended date. CD 9/1.

Wyo., Cheyenne—WAREHOUSE—BA 10/30—State of Wyoming, Court Bldg., 1 story, fireproof tilt-up concrete warehouse, $250,000. Porter & Bradley, 1009 E. Lincolnway, engrs.

▲ **Tex., Beaumont**—REFINERY UNITS—Bids Asked—Magnolia Petroleum Co., South Beaumont, hi-octane and distillate refinery unit, $14,000,000; unit to process butane-propanes, $4,500,000; thermofor catalytic cracking unit, $2,500,000; tovaformer unit, $1,500,000; vacuum flash unit, $500,000; expansion of plant No. 4. cracking unit, $2,000,000. CD 8/19.

HEAVY CONSTRUCTION—LB & CA

▲ **Orfei & Mariani & Sons, Inc.,** 1146 Homer St., St. Paul, Minn. CA **$1,203,302.** trunk and lateral sewerage sys., Projs. A thru K, CRYSTAL, MINN. Village, K. Evans, clk., Crystal, Minn. CD 9/6, under LB.

† **Cunningham-Kiewit Co.,** 4229 Lafayette St., Omaha, Neb., CA **$651,246,** constr., repair standard dikes and revetment, Missouri River Upper Monona-Black Bird Bends, near Whiting, IOWA. U. S. Eng., 1709 Jackson St., Omaha, Neb. Bids Sept. 9. CD 9/1.

† **Tobin Quarriers,** 3804 Broadway, Kansas City, Mo., CA **$543,007.** constr., repair standard revetment Missouri River, Lower Monona-Black Bird Bends near Whiting, IOWA. U. S. Eng., 1709 Jackson St., Omaha, Neb. Bids Aug. 19. CD 8/25, under LB.

▲ **MISSOURI**—State Hy. Dpt., Jefferson City,
Fred Weber Contractor, Inc., 7929 Alabama Ave., St. Louis 11, Mo. CA **$1,019,211.** (A) 1.1 mi. two 24 ft. c. conc. and 1.8 mi. of 24 ft. pavement and 64 ft. grade separation to carry Central Ave. in Eureka across U. S. 66, (B) constr. 0.3 mi. 24 ft. pavement on approaches to grade separation of 66 over Missouri Pacific and Frisco R.R. tracks, Projs. IN 602 (10) and InG 602 (11), St. Louis Co. Bids Aug. 25, awarded Sept. 8. CD 9/1, under LB.

MISSOURI—State Hy. Dpt., Jefferson City,
rejected bids Aug. 25, gravel or crushed stone surf. 5.955 mi. Franklin Co. CD 8/10.

MISSOURI—State Hy. Dpt., Jefferson City,
Mo.—**Arthur E. Quinn,** Salisbury, Mo. CA **$85,958.** grav. or crushed stone surf. 6.805 mi. Harrison Co.;
Mo.—**John R. Burton,** Montgomery City, Mo. CA **$122,012.** grav. or stone surf. 13.901 mi. Pike Co. Bids Aug. 25, awarded Sept. 14. CD 9/1, under LB.

Donaldson Constr. Co., Marysville, Mo. CA **$98,700.** exten. sewers, CARROLLTON, MO. City, Carrollton, Mo. Haskins, Riddle & Sharp, Finance Bldg., Kansas City, Mo., engrs. Bids Sept. 8. CD 11/22.

Donaldson Constr. Co., Marysville, Mo. CA **$414,146.** main outfall and lateral sewers and pumping station, LEBANON, MO. City, Lebanon, Mo. Bids Sept. 9. CD 9/8.

NORTH DAKOTA—State Hy. Dpt., Bismarck,
N. D.—**W. H. Noel Co.,** Jamestown, N. D., LB **$229,470,** base, b. conc. surf. 10.918 mi. Proj. F-312 (10) and F 373 (6), McKenzie Co.;
N. D.—**Megarry Brothers,** St. Cloud, Minn., LB **$211,788** base, b. conc. surf. 9.706 mi. Proj. S 770 (1) and F-692 (3), Sargent Co. Bids Sept. 9. CD 8/25.

▲ **Loup River Public Power Dist.,** 2416 14th St., Columbus, Neb. Owner Builds. **$6,500,000.** rural distr. lines in eastern NEBRASKA. P. E. Hampton, c/o owner, ch. engr. CD 9/1/49.

▲ **Metropolitan Utilities Dist.,** 18 and Harney Sts., Omaha, Neb. Owner Builds. **$1,230,000.** constr. 34 in. water main with lateral lines from Florence Pumping plant, OMAHA, NEB. J. C. Detweiler, c/o owner, water engr. Burns & McDonnell Eng. Co., 95 and Troost Sts., Kansas City, Mo., engr. CD 3/24.

▲ **KANSAS**—Kansas Turnpike Auth., P.O. Box 681, Topeka,
KTA—**T. L. James & Co., Inc.,** Ruston, La. CA **$2,477,867,** b. conc. 9.45 mi., Sedgwick Co.;
KTA—**Koss Constr. Co.,** 510 Iowa Des Moines Bank Bldg., Des Moines, Iowa. CA **$1,575,759.** c. conc. 6.75 mi. Shawnee Co. Bids Sept. 2, awarded Sept. 6. CD 9/8, under LB.

KANSAS — Kansas Turnpike Auth., P. O. Box 681, Topeka,
Rhoades Constr. Co. Inc., 413½ N. Main St., Newton, Kan. LB **$119,057.** Bridge 57A, dual bridges, four span continuous steel beam, Sedgwick Co. Bids Sept. 9. CD 8/31.

▲ **TEXAS**—Texas Turnpike Auth., 214 First Federal Savings Bldg., Austin, Zone 1,
Spencer Constr. Co., Carrolton, Tex., LB **$1,680,062,** Contr. D-FW23, grading, drainage 10.22 mi. from 0.5 mi. west of Ederville Rd. to 0.3 mi. west of Duncan-Perry Rd., Tarrant Co. Bids Sept. 14. CD 8/24.

▲ **Pelphrey-Basham, Inc.,** Electric Bldg., Fort Worth, Tex., CA, **$1,540,306,** est. $1,500,000 water supply line, on c.-45 in. pipe, AMARILLO, TEX. City, City Hall, Amarillo, Tex. Bids Aug. 23, awarded Sept. 5. CD 8/26, under LB.

† **E. H. Reeder Constr. Co.,** 2128 Haws St., Dallas, Tex. LB **$184,056,** est. $190,926, storm drainage conduits, Carswell Air Force Base, ENG-41-443-56-7, FORT WORTH, TEX. U. S. Eng., 100 W. Vickery Blvd., Fort Worth, Tex. Bids Sept. 9. CD 8/25.

▲† **Heldenfels Brothers,** 521 McBride St., Corpus Christi, Tex., CA, **$1,617,000.** Parallel Runway 13-31, Naval Auxiliary Air Station, NOY 86330, Spec. 4933, KINGSVILLE, TEX. Bureau Yards & Docks, Navy Dpt., Bldg. 1, Naval Station, Corpus Christi, Tex. Bids Aug. 9, awarded Aug. 31. CD 8/16, under LB.

▲† **McCann Constr. Co.,** 1803 E. Lancaster St., Fort Worth, Tex., CA, **$1,309,632,** 100-unit HOUSING, Gary Air Force Base, SAN MARCOS, TEX. Gary Air Force Base, c/o Floyd A. Henderson, Contg. Officer, San Marcos, Tex. Bids Aug. 17. CD 8/22, under LB.

† **MONTANA**—Bureau P. Rds., Dpt. Commerce, Post Office Bldg., Missoula,
M. J. Kuney, Inc., N. 120 Ralph St., Spokane, Wash. LB **$404,439** (3 bidders) clearing, grubbing, grading, drainage 2.628 mi. Y. G. B. Line Hy. Proj. 32-B4, F3, G3, Meagher Co. Bids Sept. 9. CD 9/1.

▲† **WYOMING**—Bureau P. Rds., Dpt. Commerce Bldg. 40, Denver Federal Center, Denver, Colo.,
Strong Co., Springville, Utah, CA **$1,377,686** grading, bit. 20 mi. U. S. Hy. 89 on west side of Grand Teton National Park, Teton Co. Bids Aug. 25, awarded Sept. 8. CD 8/29, under LB.

BUILDINGS—LB & CA

G. W. Madsen Constr. Co., 4916 Sunnyslope Rd., Minneapolis, Minn. CA **$758,400.** general contract GRADE SCHOOL, BLOOMINGTON (P.O. MINNEAPOLIS), MINN. Bd. Educ., A. Moir, clk., 10025 Penn Ave. S., Minneapolis 20, Minn. CD 9/6, under LB.

Watson Constr. Co., Baker Bldg., Minneapolis, Minn. LB **$768,000** (6 bidders) general contract 1st unit JUNIOR HIGH SCHOOL, between 29 and 30 Aves. and between Hayes and Marshall Sts. N.E., MINNEAPOLIS, MINN. Bd. Educ., H. Heild, archt.-engr., 807 N.E. Broadway, G. R. Arneson, city purch. agt., 301 City Hall, Minneapolis, Minn. Bids Sept. 8. CD 8/31.

L. Miller, 4349 Weber Rd., St. Louis 23, Mo. Owner Builds. **$380,640.** twenty-five 1 story, brick, frame RESIDENCES, Chevron Dr., vicinity of Buckley Rd. and Gordient Drive, ST. LOUIS COUNTY, MO.

John W. Larson, Bismarck, N. D., LB, **$431,300** general contract JUNIOR-SENIOR HIGH SCHOOL, GARRISON, N. D. Bd. Educ., Garrison, N. D. Bids Aug. 31. CD 8/18.

▲ **Harmon Constr. Co.,** 28 S. Indiana St., Oklahoma City, Okla. CA **$1,622,267.** general contract MUSIC and DRAMATIC ARTS BLDG., University of Kansas, LAWRENCE, KAN. State Dpt. Admin., Topeka, Kan. Bids Aug. 25. CD 8/10.

▲ **Hess Constr. Co.,** 1824 Van Buren St., Topeka, Kan. CA Est. **$1,500,000.** HOUSING DEVELOPMENT west of Shawnee Country Club, TOPEKA, KAN. Golf View Development Corp., Capitol Federal Bldg., Topeka, Kan.

▲ **Farnsworth & Chambers Co., Inc.,** Box 74, Houston, Tex., LB, **$1,181,500,** HOSPITAL addn., BEAUMONT, TEX. Baptist Hospital, c/o Bd. Trustees, Beaumont, Tex. Bids Sept. 8. CD 8/25.

▲ **Henry C. Beck Co.,** 1st. Natl. Bank Bldg., Dallas, Tex., CA **$2,210,000.** 15 story bsmnt. OFFICE, DALLAS, TEX. Spartan National Life Insurance Co., c/o Jack C. Vaughn, Mercantile Security Bldg., Dallas, Tex. CD 8/10.

† **C. A. Logeman,** 1037 Morales St., San Antonio, Tex., CA, **$921,204.** rehabilitation, modernization of officers'

QUARTERS, Inv. E-41-133-55-156, FORT SAM HOUSTON, TEX. U. S. Govt., Purch. Office, Bldg. 370 Fort Sam Houston, Tex. Bids June 16. CD 6/23, under LB.

▲ **Cadenhead & Rosser**, 4776 Traillake St., Fort Worth, Tex., CA, **$1,000,000.** SHOPPING CENTER, FORT WORTH, TEX. R. E. Cox Co., 300 W. 7 St. Fort Worth, Tex. Curtis A. McClure, 2854½ W. Berry St., Fort Worth, Tex., archt. CD 9/14.

▲ **Thos. S. Byrne, Inc.**, Fort Worth Natl. Bldg., Fort Worth, Tex., CA Est. **$1,500,000**, 1, 2 and 3 story, brick, tile, steel, concrete OFFICE, 6300 Camp Bowie St., FORT WORTH, TEX. Commercial Standard Insurance Co., c/o Raymond Buck, pres., Comm. Standard Bldg., Ft. Worth, Tex. CD 5/5/54.

Inglewood Park Shopping Center, Grand Prairie, Tex., Owner Builds, **$875,000.** SHOPPING CENTER, GRAND PRAIRIE, TEX. CD 7/25.

Link Road Shopping Center, c/o Emma Levy, Hilton-Shamrock Hotel, Houston, Tex. Owner Builds. **$750,000.** Unit 2, SHOPPING CENTER, HOUSTON, TEX. CD 6/8.

Eitze-Kitchens Constr. Co., Box 3116 Austin, Tex. LB **$644,000.** group of WARD BLDGS., MEXIA, TEX. Bd. for Texas State Hospitals & Special Schools, 45 and Lamar Sts., Austin, Tex. Bids Sept. 8. CD 8/22.

C. H. Elle Constr. Co., 390 Yellowstone Ave., Pocatello, Idaho, LB **$379,770** (6 bidders) HOSPITAL, between GREYBULL and BASIN, WYO. South Big Horn County Hospital District, Basin, Wyo. CD 4/6.

J. F. White Eng. Corp., Box 144, Englewood, Colo. LB **$480,079.** POWER PLANT, GALLUP, N. M. Town, Gallup, N. M. Bids Aug. 8. CD 7/25.

FAR WEST

HEAVY CONSTRUCTION—BA

STATE HIGHWAY LETTINGS

BRIDGES
October 18 Washington

STREETS AND ROADS
October 13 California

† **IDAHO**—BA 9/28—Bureau P. Rds., Dpt. Commerce, 609½ Bannock St., Boise,

Boise Co.—constr. 12.7 mi. road with 150 ft. rein.-conc. bridge over Warm Springs Creek on south fork Paytte River east of Lowman. C. R. Salmen, dist. engr.

Calif., Los Angeles—WHARF—BA 10/19—Los Angeles Harbor Dpt., City Hall, rein.-con. creosote timber wharf, Berth 199, San Pedro. $200,000. Plans deposit $25. CD 5/24/44.

BUILDINGS—BA

Calif., Norwalk—SCHOOL—BA 10/4—Norwalk City School Dist., 12152 E. Walnut St., 1 story, frame, stucco Hutchinson School, $350,000. Kistner, Wright & Wright, 816 W. 5 St., Los Angeles, archts.

▲ **Calif., Stockton**—SCHOOLS—BA 10/7—Stockton City Unified School District, c/o Supt., 304 N. San Joaquin St., separate or combined bids for two Junior High Schools (1) Lever Village Junior High School and (2) East Side Junior High School, $1,045,000 each. Plans deposit $100. Mayo, Johnson & deWolf, 307 Exchange Bldg., archts. CD 7/20.

BUILDINGS—SLC

▲ **Calif., Palmdale**—PRODUCTION FLIGHT—**Convair**, 3165 Pacific Hy., San Diego, Zone 1, soon lets contract, production flight Bldg., $1,200,000. Moffatt & Nichol, Inc., 122 5 St., Long Beach, Zone 12, engrs.

HEAVY CONSTRUCTION—LB & CA

† **J. H. Sellen Constr. Co.**, 228 9 Ave. N. Seattle, Wash., CA **$730,761** clearing, road and sidewalk mess hall, barracks, other buildings for military installation, Young's Lake, Inv. 56-5, WASHINGTON. U. S. Eng., 4735 E. Marginal Way, Seattle 4, Wash. Bids Aug. 10. CD 8/17, under LB.

▲ **General Constr. Co.**, 3840 Iowa St., Seattle, Wash., LB, **$1,159,982** (11 bidders) water supply dam on Union River, BREMERTON, WASH. City, City Hall, Bremerton, Wash. Bids Sept. 12. CD 8/17.

† **R. A. Farish Co.**, 246 E. Miner St., Stockton, Calif., CA, **$600,819**, est. $592,265, earthwork, structures, surf. for relocation of Calif. State Hy. 102 from 15 mi. east of Rutherford to Route 6, Monticello Reservoir, Napa Co., Solano. Proj., Spec. DC 4460, CALIFORNIA. Bureau Reclamation, Dpt. Interior, Winters, Calif. Bids Aug. 11, awarded Sept. 7. CD 8/22, under LB.

▲ **CALIFORNIA**—State Div. Hys., 1120 N. St., Sacramento,

Calif.—**Peter Kiewit Sons Co.**, 442 Post St., San Francisco, Calif., LB **$4,275,510.** grading, paving 5.4 mi. freeway and expressway on Hy. 50 and 10 bridges in Oakland, Alameda Co. CD 8/19;

Calif.—**Carl N. Swenson Co.**, 1095 Stockton Ave., San Jose, Calif., LB **$856,850.** grading, surf. 1.2 mi. U. S. 101 north of Greenbrae Intersection and south of Greenbrea Overhead and constr. portions of rein.-con. bridge, Marin Co. Bids Sept. 14. CD 9/1.

† **CALIFORNIA**—U. S. Forest Service, 630 Sansome St., San Francisco,

H. Earl Parker, Inc., 12 and F Sts., Marysville, Calif. CA, **$210,610.** (8 bidders) 5.05 mi. roads, Hirz Mountain Rd., Shasta Trinity National Forest, Shasta, Co.

J. S. Barrett, 15722 E. St. Gertrude St., Santa Ana Calif., LB, **$286,483**, est. $150,000. (9 bidders) sanitary sewers in Bolsa Ave., Berano St. and Harbor Blvd. Trunk Sewer, GARDEN GROVE, CALIF. Garden Grove Sanitary Dist., 13012 S. Euclid Ave., Garden Grove, Calif. Bids Sept. 7. CD 8/25.

▲ **Ukropina, Polich & Kroll and Baker-Anderson Co.**, 201 E. Las Tunas Dr., San Gabriel, Calif., LB, **$3,754,543** (8 bidders) Schedule 80, SC, 6.11 miles, for pipe line in South Gate, LOS ANGELES, CALIF. Metropolitan Water Dist. of Southern Calif., 306 W. 3 St., Los Angeles, Calif. Bids Sept. 8, CD 8/23;
Steve P. Rados, 112 Maple Ave., Monrovia, Calif. LB **$3,011,760** (9 bidders) Schedule 79, SC, 5.46 mi. 79 in. diam. welded steel pipe (Los Angeles, Calif.)

▲ **Wattson-Kier Co.**, 2323 E. Rosecrans St., El Segundo, Calif., CA, **$1,893,594**, Proj. 6, East Compton Creek No. 2, Unit 1 portion of lines A & E storm drain, Compton and Lynwood, LOS ANGELES, CALIF. Los Angeles County Flood Control Dist., 2250 Alcazar St., Los Angeles, Calif. Bids Aug. 26, awarded Sept. 6. CD 8/30, under LB.

The Lowrie Paving Co., 1755 Evans Ave., San Francisco, Calif., LB, **$271,785.** (2 bidders) existing utilities extensions, grading, paving, San Francisco Na. International Airport, Contract 158, SAN FRANCISCO, CALIF. Public Utilities Comn., City Hall, San Francisco, Calif. Bids Sept. 12. CD 9/1.

BUILDINGS—LB & CA

▲ **Western-Knapp Eng. Corp.**, 790 Folsom St., San Francisco, Calif., CA, **$4,700,000.** copper concentrator MILL addn., HAYDEN, ARIZ. Kennecott Copper Corp., Ray, Ariz. Awarded Sept. 7.

J. P. Peterson, 205 4 Ave., Hoquiam, Wash., LB, **$439,868** (3 bidders) general contract enlarging, altering Emerson ELEMENTARY SCHOOL, enlarging HIGH SCHOOL GYMNASIUM, altering 3 ELEMENTARY SCHOOLS, HOQUIAM, WASH. School District 28, Hoquiam, Wash. Bids Sept. 7. CD 8/22.

▲ **Sherwood Forest Developers**, 1242 Lincoln Ave., Anaheim, Calif., Owner Builds, **$1,213,000** 103 frame, stucco DWELLINGS, Brookhurst and Valley Sts., ANAHEIM, CALIF.

Exhibit Homes, Inc., 8900 Olympic Blvd., Beverly Hills, Calif. Owner Builds. **$1,338,374**, 122 frame, stucco DWELLINGS, Greenlief St., Tract 2333, BUENA PARK, CALIF.

The Fieldstone Co., 9838 E. Belmont Ave., Bellflower, Calif. Owner Builds. **$844,819.** 86 frame, stucco DWELLINGS, at Crescent and Western Aves., in Tract 2588, BUENA PARK, CALIF.

▲ **La Mirada Woods Building Co.**, 1166 E. 58 St., Los Angeles, Calif. Owner Builds, **$2,366,800.** 234 frame, stucco DWELLINGS, Excelsior and San Feliciano Drives, LA MIRADA, CALIF. Wm. Bray, 962 N. La Cienega Blvd., Los Angeles, Calif., archt.

Baruch Corp., 321 S. San Vicente Blvd., Los Angeles, Calif., CA, **$737,000.** 67 DWELLINGS, Landsford, Lithtcap and Raystacks Sts., LANCASTER, CALIF. Magnolia Downs, Box 48488 Briggs Station, Los Angeles, Calif. Paul Duncan, 13310 Moorpark St., Sherman Oaks, archt.

Tamarack Constr. Co., 7213 Woodley Ave., Van Nuys, Calif., Owner Builds, **$599,200.** 56 frame, stucco DWELLINGS, Kingtree Ave. and W. Ave. 48, LANCASTER, CALIF. Wm. M. Bray, 962 N. La Cienega St., Los Angeles, Calif., archts.

▲ **Pacific Co.**, 801 Cedar St., Berkley, Calif., LB, **$2,222,000** (10 bidders) HIGH SCHOOL, 48-acre site, Pacific Ave. and Sargent Rd., LODI, CALIF. Lodi Union High School Dist., Lodi, Calif. Bids Sept. 8. CD 8/19.

▲ **Eberhardt & Isaksen**, 816 Colorado St., Palo Alto, Calif., CA, **$1,750,000.** 100 HOME Sub-division, on Lazy Acres property, LOS ALTOS, CALIF.

Edgar A. Griswold, 2160 Oak Knoll Ave., San Marino, Calif., **$120,000.** concrete WAREHOUSE, 3161 E. Washington Blvd., LOS ANGELES, CALIF. Robt. Budrow, 222 E. 3 St., Los Angeles, Calif.

Caesar-Callan Development Corp., 2790 Junipero Serra Blvd., Colma, Calif., Owner Builds, **$721,600.** 82 HOME subdivision, Flood Estates No. 2, MENLO PARK, CALIF.

▲ **Bayshore Constr. Co.**, 744 Folger Ave., Berkeley, Calif., CA, **$2,509,000.** 14 story 60-unit APARTMENT, OAKLAND, CALIF. Owner, c/o Confer & Willis, archts., 366 40 St., Oakland, Calif.

Harvey A. Nichols, 926 E. Slauson Ave., Los Angeles, Calif., CA, **$698,700**, La Canada JUNIOR HIGH SCHOOL addn., La Canada, PASADENA, CALIF. Bd. Educ., 351 S. Hudson St., Pasadena, Calif. Bids Aug. 30, awarded Sept. 6. CD 9/7, under LB.

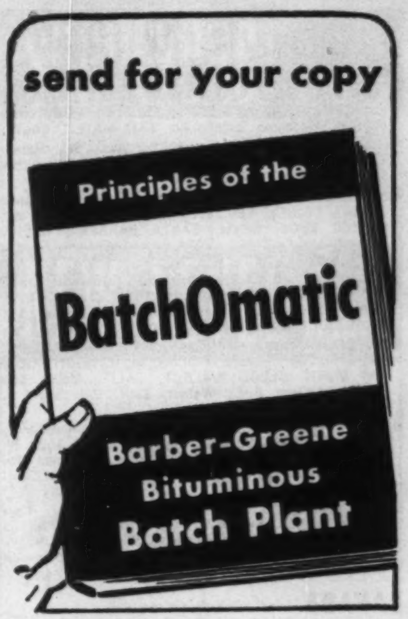
▲ **L. E. Dixon Co.**, 16340 Amar Rd., Puente, Calif., CA, **$2,490,000.** 249 frame, stucco DWELLINGS, Mulvane and Lonkelton Sts., PUENTE, CALIF. L. E. Dixon Co., 409 S. California St., San Gabriel, Calif.

▲ **Stolte, Inc.**, 8451 San Leandro St., Oakland, Calif., LB **$1,909,000.** E. M. Downer Junior High SCHOOL, RICHMOND, CALIF. Richmond Union High School District, 1108 Bissell Ave., Richmond, Calif. Bids Sept. 12. CD 8/24.

Beech Homes, 8242 W. 3 St., Los Angeles, Calif., Owner Builds, **$608,170.** 65 frame, stucco DWELLINGS, Sterling Ave., SAN BERNARDINO, CALIF.

Empire Builders, 1153 "F" St., San Bernardino, Calif. Owner Builds, **$639,496**, 86 frame, stucco DWELLINGS, 13 and Bangor Sts., Tract 4823, SAN BERNARDINO, CALIF.

▲ **MacDonald, Young & Nelson**, 351 California St., San Francisco, Calif., CA, Approx. **$3,500,000.** 1 to 3 story, 190,000 sq. ft. OFFICE, 200-car off-street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parking, cafeteria, etc., SAN FRANCISCO, CALIF. Firemans' Fund Insurance Co., 401 California St., San Francisco, Calif. Bids Aug. 11. CD 9/8, under LB.

▲ **Mel. K. Dollinger**, 964 S. Bayshore Blvd., San Mateo, Calif., Owner Builds, **$1,276,000.** 44 HOME subdivision, Woodland Subdivision, SAN MATEO, CALIF.

Westhore Co. of San Mateo, 3-37th Ave., San Mateo, Calif., Owner Builds, **$552,000.** 46-HOME subdivision, SAN MATEO, CALIF.

James I. Barnes Constr. Co., 1119 Montana Ave., Santa Barbara, Calif., LB, **$823,900,** CLASSROOM and OFFICE BLDG, Goleta, SANTA BARBARA, CALIF. University of California, Santa Barbara Campus, Goleta, Calif. Bids Sept. 7.

Grand Constr. Co., 134 W. Beach St., Inglewood, Calif., CA, **$818,530.** 77 frame, stucco DWELLINGS, Tract 18911, TORRANCE, CALIF. Grande Vista Homes, 134 W. Beach St., Inglewood, Calif.

Kemp Brothers, 8750 Mettler St., Los Angeles, Calif., LB, **$738,000** (6 bidders) 40,000 sq. ft. AUDITORIUM and MUSIC BLDG., WALNUT, CALIF. Mount San Antonio College Dist., Walnut, Calif. Bids Sept. 1. CD 8/4.

Hahn-St. John, 219 S. Hawthorne Blvd., Hawthorne, Calif., CA, **$346,500.** brick, stucco STORE, 1120 W. Garvey Blvd., WEST COVINA, CALIF. Shulman Development Co., 3745 Newhaven Rd., Pasadena, Calif. CD 7/6/54.

Leo J. Shanaham & Sons, 15630 Crenshaw Blvd., Gardena, Calif., CA, **$414,000.** 46 frame, stucco DWELLINGS, Steprock, Nashville and Bluefield Aves., WHITTER, CALIF. Alondra Investment Co., 15630 Crenshaw Blvd., Gardena, Calif.

CANADA

HEAVY CONSTRUCTION—LB & CA

STATE HIGHWAY LETTINGS

BRIDGES
October 5 Ontaria

STREETS AND ROADS
September 28 Ontario
September 30 British Columbia

▲ **ONTARIO**—BA 9/27—Hydro-Electric Power Comn. of Ontario, 620 University Ave., Toronto, Zone 2, constr. Cornwall Dyke closure and diversion of Cornwall Canal, St. Lawrence Power Project. Plans deposit $25.

BUILDINGS—BA

▲ **Alta., Calgary**—DEPARTMENT STORE, etc.—BA 10/1—Moody & Moore, archts., 295 Broadway Ave., Winnipeg, Man., 4 story, bsmnt., 100x200 ft., steel, stone department store addn., 4 story multi-level parking garage, 8 Ave. and 4 St. W., for T. Eaton Co. of Canada Ltd., 190 Yonge St., Toronto, Ont. $3,500,000. CD 3/23.

BUILDINGS—SLC

Que., Ste. Hyacinthe—FACTORY—Allis-Chalmers Rumely Ltd., c/o C. E. Meyer, Grand Hotel, Ste. Hyacinthe, soon lets contract 1 story, 100x200 ft., rein-con., steel frame, brick factory. $150,000. Cyr & Cyr, 482 Ste. Anne St., Ste. Hyacinthe, archts. Lefrancois & Laflamme, 2168 Mount Royal St. E., Montreal, engrs. CD 9/9.

HEAVY CONSTRUCTION—LB & CA

Shannon Constr. (Alta.) Ltd., Didsbury, Alta., LB, **$616,014.** earthfill dam and appurtenant work St. Mary Project, about 12 mi. south of Stirling, ALBERTA. Prairie Farm Rehabilitation Act, Regina, Sask. CD 1/25/45.

▲ **BRITISH COLUMBIA**—British Columbia Govt., Parliament Bldgs., Victoria,
Mannix Ltd., 736 Granville St., Vancouver, B. C., LB, **$1,088,240.** grading section for extension to Pacific Great Eastern Ry. from Mile 57.0 to Mile 82.0 north of Prince George. Bids Aug. 29. CD 8/23.

McNamara Constr. Co. Ltd., 42 Industrial St., Leaside, Ont., CA, **$879,080.** harbor repairs and imprvs., HAMILTON, ONT. Dpt. P. Wks., Hunter Bldg., Ottawa, Ont. CD 9/14, under LB.

▲ **Mannix Ltd.**, 1371 S. W. Marine St., Vancouver, B. C., LB, **$1,088,240.** Railway Prince George to Dawson Creek for Mile 57 to Mile 82.0 Vancouver, BRITISH COLUMBIA, Pacific Great Eastern Ry. Co., 94 West Pender St., Vancouver, B. C. CD 2/12/54.

M. Barr Constr. Ltd., 290 Westdale Ave., Kingston, Ont., CA, **$132,844.** 11,600 ft. 6- to 42-in. storm and sanitary sewers, KINGSTON, ONT. City, City Hall, Kingston, Ont. CD 2/21/50;
Holdcroft Constr. Co. Ltd., Division St., Kingston, Ont., CA, **$113,220,** Contract 55-3, 7,000 ft. 6- to 15-in. pipe and 3,500 ft. 10- to 36-in. pipe, Portsmouth St. (Kingston, Ont.).

McNamara Constr. Co., Ltd., 42 Industrial St., Toronto, Ont., CA, **$245,193.** grading specified areas of Humber Sewage Treatment Plant, TORONTO, ONT. Municipality of Metropolitan Toronto, 67 Adelaide St. E., Toronto, Ont. Awarded Sept. 9. CD 1/5.

Dupont Constr. Co. Ltd., 355 Rogers Rd., Toronto, Ont., LB, **$116,194,** expansion, CUSTOMS and POSTAL BLDG. at Toronto Malton Airport, TORONTO, ONT. Dpt. Transport, Hunter Bldg., Ottawa, Ont. R. A. Bradley, 25 St. Clair Ave. E., Toronto, Ont., district airway engr. CD 7/8.

QUEBEC—Dpt. P. Wks., Parliament Bldgs., Quebec City, **Martin & Casaubon,** Nicolet, Que., CA, **$97,000.** rein.-con. bridge on Quebec Provincial Hy. 49 at St. Sophie de Leonard. Olivier Desjardins, c/o owner, ch. engr. Awarded Sept. 8.

Tri-Bec Inc., Centre Industrial No. 5, Quebec City, Que., CA, **$84,669.** steam distr. sys., exten., Canadian Army Camp, VALCARTIER, QUE. Defence Contr. (1951) Ltd., 56 Lyon St., Ottawa, Ont. Bids Aug. 3, awarded Sept. 7. CD 7/18.

Union des Carriers & Pavages Ltd., 496 Second Ave., Quebec City, Que., CA, **$148,430.** grading, paving, walks, curbs, landscaping and fencing Canadian Army Camp, VALCARTIER, QUE. Defence Constr. (1151) Ltd., 56 Lyon St., Ottawa, Ont. Awarded Sept. 7.

BUILDINGS—LB & CA

Bird Constr. Co. Ltd., 12525 127 Ave., Edmonton, Alta., CA, **$605,112.** BARRACKS and ADMINISTRATION BLDG., R.C.M.P. Barracks, EDMONTON, ALTA. Dpt. P. Wks., Hunter Bldg., Ottawa, Ont. CD 9/14, under LB.

Don Titus, Edmonton, Alta. Owner Builds. **$500,000.** masonry, steel HOTEL, GRANDE PRAIRIE, ALTA. Awarded Sept. 8. CD 8/24.

▲ **Bennett & White Constr. Co. Ltd.**, 660 Howe St., Vancouver, B.C., CA, **$1,110,438,** PUBLIC BUILDING addn., NEW WESTMINSTER, B. C. Dpt. P. Wks., Hunter Bldg., Ottawa, Ont. Bids Aug. 3. CD 8/10, under LB.

▲ **B. Perini & Sons (Canada) Ltd.**, 49 Jackes Ave., Toronto, Ont., CA, **$1,569,196** (8 bidders) 5 OFFICERS' QUARTERS and 4 OFFICERS' MESSES, Canadian Army Camp, Gagetown, Contract "H", FREDERICTON, N. B. Defence Constr. (1951) Ltd., 56 Lyon St., Ottawa, Ont. Bids Aug. 10, awarded Sept. 6. CD 7/8.

Van Dyke Constr. Co., Commee Ave., Sault Ste. Marie, Ont., Owner Builds. **$500,000.** 50 unit HOUSING PROGRAM in Clergue Subdivision, SAULT STE. MARIE, ONT. CD 9/14.

▲ **Foundation Co. of Canada Ltd.**, 1220 Bay St., Toronto, Ont., CA, **$3,076,770.** 2 story, part bsmnt., 190x440 ft., steel frame WOMEN'S BLDG., Canadian National Exhibition, TORONTO, ONT. City, City Hall, Toronto, Ont. Bids Aug. 22, awarded Sept. 7. CD 9/8, under LB.

Oaklyn Investments, 1500 Eglinton Ave. W., Toronto, Ont., Owner Builds, **$600,000.** 12 story, 127-suite APARTMENT, Tichester and Lonsmouth Rds., TORONTO, ONT. Harry B. Kohl, 29 Colborne St., Toronto, Ont., archt. Alex Tobias, 24 Cecil St., Toronto, Ont., engr.

▲ **B. Perini & Sons Canada Ltd.**, 49 Jackes Ave., Toronto, Ont., CA, **$3,200,000.** 90-95 luxury-type suites, 10 story, penthouse 80-200 ft., co-op tenant-owner APARTMENT, basement parking for 100 cars, 500 Avenue Rd., TORONTO, ONT. Co-sponsors; B. Perini & Sons, 49 Jackes Ave., Toronto, Ont., and Industrial Eng. Co., 50 Church St., New York City, N. Y., U. S. A. Gordon S. Adamson & Associates Ltd., 52 St. Clair Ave. E. and Bregman & Hamann, 7 Adelaide St. E., both Toronto, Ont., archts. CD 3/1.

▲ **Cecil Carpenter & Co. Ltd.**, 5139 Decarie Blvd., Montreal, Que., CA, **$1,000,000.** 4 story, 19,000 sq. ft. OFFICE, Canora Rd. and Laird Blvd., MONTREAL, QUE. B. C. Salamis & Assocs., 1001 MacNaughton Ave., Mount Royal, Montreal, Que. Awarded Sept. 9. CD 2/18.

▲ **Sir Robert McAlpine & Sons (Canada) Ltd.**, 1610 Sherbrooke St. W., Montreal, CA, **$1,540,000.** 3 story, bsmnt., rein.-con., brick, stone MILITARY COLLEGE expansion, ST. JOHNS, QUE. Defence Constr. Ltd. (1951) Ltd., 56 Lyon St., Ottawa, Ont. Bids Aug. 4, awarded Sept. 7. CD 7/21.

LATIN AMERICA

HEAVY CONSTRUCTION—LB & CA

▲ **Oceanic Constr. Co.**, 4538 E. Firestone Blvd., Southgate, Calif., U. S. A. LB **$5,657,680,** Alt. **$5,237,680,** Proj. 17, approx. 72 kilometers grading, drainage, select borrow base, vicinity of Malacatancito, Inter-American Hy. Proj., GUATEMALA. Guatemalan Govt., Hy. Auth., Guatemala City, Guatemala. Bids Sept. 10, CD 8/17;
Compania L. Aguila, Mexico, LB **$1,475,824,** Proj. 16, approx. 30 kilometers, grading, drainage, select borrow base, Selegua Canyon Area, Inter-American Hy. Proj. (Guatemala).
Incongua Rodriquez and Cia, Guatemala, LB **$3,271,558,** Alt. **$2,849,058,** Proj. 18, approx. 60 kilometers, grading, drainage, crushed gravel or stone base course, Patzicia to Santa Apolonia, Inter-American Hy. Proj. (Guatemala). CD 8/3.

AMERICANS ABROAD

HEAVY CONSTRUCTION—LB & CA

▲ Bids will be taken on the following project under International competitive bidding of NATO.

NETHERLANDS

DeDirecteur Gebouwen, Werken en Terreinen, Bagijnestraat 40, The Hague, Holland. Proj. ICB No. 7, supply approx. 40 kilometers 4 in. pipe, 7 kilometers 10 in. pipe; one kilometer 6 in. pipe; coating and laying pipe line incl. constr. valve pits, cathodic protection and river crossings; building pump house with water supply ventilation, sump tanks, etc.; constr. two fuel tanks with 5,000 cu. meters capacity, incl. roads, manifolds, truck and barge loading facilities, fencing, etc. $1,069,200. Firms wanting to bid on these projects should report their interest before September 20. For information on bidding NATO projects see 6/25 Construction Daily.

HEAVY CONSTRUCTION—LB & CA

▲† **Corbetta Constr. Co.**, 220 E. 42 St., New York, N. Y., and Construcciones Civiles, Madrid, Spain, CA **$17,372,913,** harbor constr. for U. S. Naval Facilities for Bureau of Yards & Docks, Navy Dpt., 18 St. and Constitution Ave. N. W., Wash. 25, D. C., EAST ROTA, SPAIN. Brown-Raymond-Walsh (Prime Contractors) 122 E. 42 St., New York, N. Y. Bids 9/7. CD 9/12, under LB.

PROPOSED PROJECTS

WATER SUPPLY

▲ **Mich., Detroit**—City, Bd. Water Comrs. 735 Randolph St., raw water booster station, Springwells Station, Dearborn, **$4,500,000,** Ayres Lewis, Norris & May, 500 Wolverine Bldg., Ann Arbor, consult. engrs. CD 7/19.

SEWERS, WASTE DISPOSAL

▲ **N. Y., Whitestown**—Town, sewage treatment plant, sanitary sewerage sys. **$1,000,000.**

▲ **O., Euclid**—City, City Hall, 585 E. 222 St., Cleveland, Zone 23, revised plans for sewage disposal plant call for an increased cost from $3,800,000 to **$4,500,000.** Havens & Emerson, 640 Leader Bldg., Cleveland, Zone 14, consult. engrs. CD 8/17.

▲ **Utah, Orem**—Orem City Corp., L. A. Beckman, city engr., Orem, disposal plant, sewer and water lines exten. **$1,500,000.** Caldwell, Richards & Sorensen, 408 Zion Saving Bank Bldg., Salt Lake City, consult. engrs.

BRIDGES

▲ **ARKANSAS**—State Hy. Dpt., Little Rock,
Pulaski Co.—Third bridge expressway at Little Rock-North Little Rock. **$2,500,000.** Brown & Blauvelt, 468 4 Ave., New York, N. Y., consult. engrs. CD 12/24/43.

▲ **Que., Montreal**—City, City Hall, Jacques Cartier Bridge approaches, incl. autostrade from Sherbrooke St. E. to bridge with parking facilities and bus terminus, **$6,000,000.** Lucien L'Allier c/o owner, ch. engr.

SEWERS, WASTE DISPOSAL

▲ **D. C. Wash**—D. C. Govt., Dpt. Hys., 499 Pa Ave. N. W. paving Deane Ave. and Grant St., Eastern Ave. from Minnesota Ave. and 63 St. N. E. **$1,000,000;** widening Eye St. N. W., Massachusets Ave. to New York Ave. **$75,000;** widening "L" St. N. W. Massachusetts Ave. to New York Ave., **$75,000;** paving around Mt. Vernon Square N. W. **$90,000;** paving N. Capitol St., Michigan Ave. to eastwest crossing of Soldiers Home, **$125,000.** paving eastwest crossing Soldiers Home, Park Pl. and Harewood Rd., **$400,000;** misc, curb and gutter, side walk and alley, resurf. work at various locations. **$2,200,000.** CD 7/14/44.

▲ **O., Canton**—City, City Hall, North-South Expressway, **$7,360,000.** Michael Baker, Jr., Baker Bldg., Rochester, Pa., consult. engr. CD 1/17.

▲ **Tex., Dallas**—City, City Hall, Main and Harwood Sts., **$8,000,000** bond election Oct. 1, road imprvs. CD 11/21/51.

EARTHWORK, WATERWAYS

▲ **Calif., Sacramento**—Sacramento Municipal Utility District, 21 and K Sts., bond election Dec. 6, 160,000 kw. hydro-electric development on upper American River, El Dorado Co. **$82,000,000.** Frank E. Bonner, 1 Montgomery St., San Francisco, consult. engr. CD 12/21/53.

▲ **Iowa, Davenport**—Quality Home Builders, Inc., 837 River St., imprv. new 650-acre building site, incl. grading, sewers, water, gas and paving, just NW of city limits, **$1,000,000.**

▲† **Utah**—U. S. Eng., 1209 8th St., Sacremento, Calif. water supply and flood control dam, Little Dell Creek, tributary to Parley Creek, near Salt Lake City. **$2,000,000-$5,000,000.**

▲ **Wisconsin**—Northern States Power Co., 2 S. Barstow St., Eau Claire, dam and generating plant, **$2,803,300;** sub-station $112,500, Menomonie Dam on Red Cedar River, Dunn Co. Pioneer Eng. & Service Co., 231 N. La Salle St., Chicago, Ill., consult. engrs. CD 3/2.

AIRPORTS

▲† **Calif., Hamilton Air Force Base**—PAVING, etc.—U. S. Eng., 180 New Montgomery St., San Francisco, paving, operation, and personnel facilities, troop housing, Hamilton Air Force Base, **$1,501,000.**

▲† **Del., Dover**—AIR BASE IMPRVS.—U. S. Eng., 2635 Abbottsford Rd., Phila., Pa., electric system in maintenance hangar, **$100,000;** organizational hangar, shops and access apron, **$500,000;** washrack industrial waste treatment plant and apron access taxiway, incl., **$500,000;** gymnasium and officers' club, **$500,000;** organization maintenance shop, squadron headquarters bldg., utilities, swimming pool, equipment house, outdoor swimming pool, **$500,000;** taxiway lighting, **$100,000;** fuel pipe line, **$3,000,000,** all at Dover Air Force Base. Whiteside, Foster, Damon & Doane, Inc., Penna. R. R. Bldg., Wilmington, Del., consult. engr-archt. CD 8/31.

▲† **Del., New Castle**—BULK STORAGE, etc.—U. S. Eng., 2635 Abbottsford Rd., Phila., Pa., jet fuel bulk storage, $100,000; Bids in December; bldgs., shops, various other facilities, $3,000,000; W. Ellis Preston, 903 Jefferson St., Wilmington, engr.-archt.; approach lighting and taxiway lighting $100,000; ordnance storage igloos $100,000, Von Storch, Evans & Burkavage, 117 S. 17 St., Phila., Pa., engrs., foregoing work all at New Castle Air Force Base. CD 5/12/54.

▲ **N. J., Wrightstown**—FUELING FACILITIES, ETC.—U. S. Eng. 2635 Abbottsford Rd., Phila., Pa., fueling facilities, **$100,000.** John L. Kistner, 1711 Vine St., Phila, Pa., consult. engr.; curbs, gutters, drainage and erosion control for existing roads, **$3,000,000.** Michael M. Burris, 485 Engle St., Englewood, consult. engr. all foregoing work at McGuire Air Force Base. CD 8/31.

▲† **N. C., Edenton**—HOUSING—P. Wks. Office, Fifth Naval Dist., Norfolk 11, Va., family housing, Marine Corps Auxiliary Naval Station, **$1,421,500.**

▲† **Tex., Lockland Air Force Base**—DORMITORY—U. S. Eng., Box 1229, Galveston, plans by Associated Architects, consult. engrs.-archts., 2506 Richton St., Houston, airmen's dormitory, dental clinic, hospital, dining hall, etc. **$1,000,000.** CD 5/2/51.

PUBLIC BUILDINGS

▲ **Colo., Lakewood**—SCHOOLS—Jefferson County School District No. 1, Lakewood, new high school for Lakewood and Wheatridge and other schools addns. **$7,750,000.** Bond election Feb. 1956. CD 11/29.

▲ **Mass., Monson** — HOSPITAL — State, Dpt. Mental Health, 15 Ashburton Place, Boston, plans by Aisner & Atwood, 10 Newbury St., Boston, M-614, 3 story, bsmnt. 700,000 cu. ft. masonry state hospital, **$1,000,000.**

▲ **Mich., Kalamazoo**—LIBRARY-MUSEUM—City, Bd. Educ., **$1,200,000** bond election Oct. 3, library-museum, Louis C. Kingscott & Assoc., 511 Monroe St., archts. CD 8/3.

▲ **Minn., Robbinsdale**—SCHOOL—Bd. Educ., R. J. Parish, clk., Independent School Dist. No. 24, Robbinsdale, Minn., **$1,500,000** bond election Sept. 20, school construction, incl. grade school west of State Hy. 152 and south of 57 Ave. North in Brooklyn Center. Bissell & Belair, 1111 Nicollet Ave., Minneapolis, archts.

▲ **Mont., Bozeman**—BUILDINGS—Montana State College, Bozeman, 2 story structures to house students and faculty members, **$1,500,000.**

▲ **N. Y., New York**—HIGH SCHOOL—Bd. Educ., Bureau Constr., 42-15 Crescent St., Long Island City, plans by Gehron & Seltzer, 101 Park Ave., Zone 17, Junior High School 44, 100-146 W. 77 St. **$2,800,000.** CD 11/29.

▲ **Pa., Clairton**—SCHOOL—West Jefferson Hills Joint School, Box 36 R. D. No. 1, plans by Joseph Hoover, 330 Blvd. of Allies, Pittsburgh, 1 story, steel, brick, Senior High School, Jefferson Boro, **$1,100,000.** Elwood S. Tower, Investment Bldg., Pittsburgh, consult. engr.

▲ **R. I., Howard**—POWER PLANT—State R. I. & Prov. Plants, Purch. Agent, State House, Providence, plans by Jenks & Ballou, archts.-consult. engrs., Industrial Trust Bldg., Providence, power plant. **$1,250,000.** CD 9/43.

COMMERCIAL BUILDINGS

▲ **Calif., Los Angeles**—PSYCHIATRIC—Queen of Angels Hospital, 2301 Belleview Ave., plans by Barker & Ott, 4334 W. Pico Blvd., 4 story, rein.-con. psychiatric addn. to hospital. **$1,200,000.**

▲ **Calif., Petaluma**—HOME—John Novak, Novato, 290 home sub-division and shopping center. **$5,000,000.**

▲ **Calif., San Carlos**—HOMES—Bower & Lesser Co., 244 Finger Ave., Redwood City, 220 home sub-division. **$6,000,000.**

▲ **Ill., Chicago** — OFFICE — Salvation Army, 717 N. State St., 8 story office. **$1,250,000.**

▲ **Iowa, West Des Moines**—SHOPPING CENTER—Mid-West Foods, Inc., 1500 Delaware St., Des Moines, shopping center in Clover Hills Addition. **$2,000,000.**

▲ **Md., Baltimore**—DORMITORY, etc.—Johns Hopkins University, Charles and 32 St., dormitory and dining hall for medical students, **$1,600,000.**

▲ **Minn., St. Louis Park**—OFFICE and WAREHOUSE—Coast-to-Coast Stores, Inc., A. C. Melamed, pres., 29 S.E. Main St., Minneapolis, office and 350,000 sq. ft. warehouse. **$2,500,000-$3,000,000.**

▲ **N. Y., Linoleumville**—SHOPPING, BUSINESS and AMUSEMENT CENTER—Syndicate, c/o Allen D. Emil, 430 Park Ave., New York, shopping, business and amusement center, to be called Staten Island Center, on 165 acres at Richmond Ave. and Forest Hill Rd. near here. **$1,000,000.**

▲ **N. Y., New York**—APARTMENT—80 East End Corp., 332 E. 149 St., Zone 51, plans by H. I. Feldman, 415 Lexington Ave., Zone 17, 12 story apartment, 80-86 East End Ave., and 535-39 E. 83 St. **$1,233,000.**

▲ **O., Brooklyn**—HOMES—Alex Fodor Realty Co., 3308 Loari Ave., Cleveland, Zone 13, 220 homes on 44 acre site on Tiedeman Rd., near new Lamson-Sessions Plant. **$4,000,000.**

▲ **O., University Heights**—STORE—The May Co., Euclid Ave. and Ontario St., Cleveland, Zone 14, plans by Jack Alan Bialosky, 1220 Huron Rd., Cleveland, Zone 15, department store, Cedar and Warrensville Center Rds. **$5,000,000.** Victor Gruen, Inc., 8460 Santa Monica St., Los Angeles, Calif., consult. engr. CD 5/16.

▲ **Okla., Tulsa**—SHOPPING CENTER—Sears Roebuck & Co., 925 S. Homan St., Chicago, Ill., shopping center, 21st and Yale Sts. **$2,000,000.**

▲ **Pa., Harrisburg**—OFFICE and SERVICE—Pennsylvania Power & Light Co., Ninth and Hamilton Sts., Allentown, plans by Lacy, Atherton & Davis, Sterling Hotel, Wilkes-Barre, branch office and service bldg., 19 and Brookwood Sts. **$1,000,000.**

▲ **S. C., West Columbia**—HOUSING—Mrs. Emily P. Brazell, Creason Co.-agent, 1248 Lady St., Columbia, 181 homes. **$3,500,000.**

▲ **B. C., Vancouver**—BANK and OFFICE—Royal Bank of Canada, 675 W. Hastings St., 6 or 7 story, 120x125 ft., two lower floors for bank facilities and balance for offices. **$2,000,000.**

▲ **Man., Transcona**—HOUSING—Model Homes Ltd., Smithfield Ave. and McGregor St., Winnipeg, 900-unit housing. **$11,000,000.**

▲ **Ont., Toronto**—OFFICE—Traders Finance Corp. Ltd., 44 King St. W., plans by Marani & Morris, 1250 Bay St., 6 story, bsmnt., rein.-con. structural steel, brick office, parking facilities in rear. **$3,000,000.** Wallace, Carruthers & Assocs., Ltd., 35 Isabella St., consult. engrs. CD 3/3.

INDUSTRIAL BUILDINGS

▲ **Calif., San Francisco** — BUS TERMINAL — Barrett Constr. Co., 1800 Evans Ave., San Francisco, 1 story, 40,000 sq. ft., Airport Bus Terminal, Taylor and O'Farrell Sts. **$1,500,000.**

▲ **Calif., San Francisco**—WAREHOUSE—Sterling Furniture Co., 1049 Market St., plans by J. Francis Ward, 215 Leidesdorff St., warehouse, **$1,000,000.** Start construction by Oct. 15.

▲ **Ind., Frankfort**—CANDY FACTORY—Mars, Inc., 2019 N. Oak Park St., Chicago, Ill., plans by Daggett-Naegele-Daggett, 567 W. Westfield Blvd., Indianapolis, structural steel, masonry candy factory, Over **$2,500,000.**

▲ **Mich., Alpena**—MILL—Abitibi Power & Paper Co., Ltd., 408 University St., Toronto, Ont., Canada, hardboard mill, 72 acre site. **$10,000,000.**

▲ **Minn., Golden Valley (P.O. Minneapolis)**—LABORATORY—General Mills, Inc., C. H. Bell, pres., 402 Second Ave. S., Minneapolis, plans by Voorhees, Walker, Smith & Smith, 101 Park Ave., New York, N. Y., expanded research laboratories on site of County Road 18 and north of Plymouth Ave. **$2,000,000.** CD 7/22.

▲ **N. Y., New York**—GARAGE—Gulf Oil Co., Gulf Bldg., Pittsburgh, Pa., 3 story, 160x180 ft. parking garage, East River and E. 23 St. **$1,000,000.**

▲ **O., Warrensville Heights**—PLANT—Sobel Corrugated Containers, Inc., 3223 E. 55 St., Cleveland, Zone 27, 1 story, 180,000 sq. ft. plant, 15-acre site, Miles Ave. near E. 186 St. with inside railroad siding. **$1,500,000.**

▲ **Tex., Houston**—PLANT—Lone Star Cement Corp., M. Esperson Bldg., plant expansion **$6,000,000;** storage-warehousing, **$300,000.**

▲ **Tex., Texas City**—PRODUCTION FACILITIES—Carbide & Carbon Chemicals Co. (Div. Union Carbide & Carbon Corp.) Texas City, constr. addnl. vinyl acetate production facilities, **$10,000,000;** water sys. **$55,000;** storage, **$200,000.**

▲ **Utah, Moab**—POTASH MINING, etc.—Delhi-Taylor Oil Corp., Corrigan Tower Bldg., Dallas, Tex., potash mining and reduction center. Est. exceeds **$2,000,000.**

▲ **Va., Leesburg** — POWER PLANT — Potomac Electric Power Co., 10th and E Sts., Wash., D. C., steam power plant in Loudoun Co. on Potomac River, (first unit) est. **$25,000,000,** total est. **$70,000,000.**

▲ **Alta., Edmonton**—WAREHOUSE—Ford Motor Co. of Canada Ltd., Windsor, warehouse for parts and accessories, 10½ acre site, **$1,000,000.**

▲ **Ont., Maitland**—PLANT—Dupont Co. of Canada, Maitland, orlon plant. **$1,000,000.**

UNCLASSIFIED

▲ **N. Y., Brooklyn**—PIER—Dpt. Marine & Aviation, Pier A, North River, New York, Zone 4, 20 Street Pier, **$4,000,000;** 39 Street Pier, **$10,000,000.** CD 3/2/45.

▲ **N. Y., New York**—SHIP TERMINAL—Dpt. Marine & Aviation, Pier A, North River, Zone 4, ship terminal at Park Place, North River, **$10,600,000;** rail car-float terminal at W. 23 St. North River, **$1,500,000;** railroad float terminal at W. 30 St., **$1,450,000;** three-stage marginal wharf terminal development in lower East River from Whitehall St. Ferry Terminal up to Pier 9, **$35,000,000.**

▲ **N. Y., New York**—PIERS—Dpt. Marine & Aviation, Pier A, North River, Zone 4,
Pier 30 North River, **$7,500,000;**
Pier 75 at West 36 St. North River, **$12,800,000;**
Pier 79 North River, **$7,500,000.** CD 8/17/54;
Pier 94 North River for use by Italian Line, **$5,000,000.** CD 7/27/54;
Pier 96 at W. 56 St. North River, **$10,000,000.**

▲† **Pennsylvania and New Jersey**—AAA FACILITIES, etc.—U. S. Eng., 2635 Abbottsford Rd., Phila., dual site facilities (addnl.), Phila. Defense Area, Bucks and Chester Counties, Pa., and Camden Co., N. J., **$3,000,000;** generator bldgs at 12 Special AAA Sites, Phila. Defense Area, Pa., **$500,000.** The Ballinger Co., 121 N. Broad St., Phila., Pa., engr.

▲ **Texas**—GAS LINE—El Paso Natural Gas Co., Bassett Tower, El Paso, 61.6 mi. natural gas line from near Robert Lee, Coke Co. to owners compressor station, near Midland, Midland Co. **$2,225,000.** CD 2/5/53.

(Proposal Advertisements see pp. 52 to 55)

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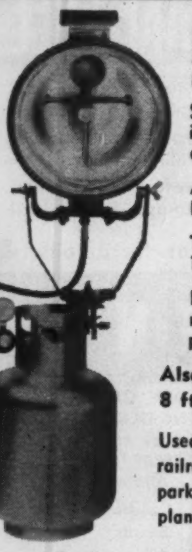

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UNIT PRICES

10-City Waterworks Takes 2-Way Bids at Wylie, Tex

A $1.1-million pipeline from Wylie, Texas to Dallas and a $2.26 million treatment plant at Wylie will serve Garland, McKenney, Plano, Farmersville, Princeton, Wylie, Forney, Rockwall, Royce City, Mesquite and a portion of Dallas. The North Texas Municipal Water District is in charge of this improvement. Forrest and Cotton, Dallas, are the consulting engineers.

Two designs for the water supply line and two-way bids compare the advantages of a 42 in.-36 in. with a 36 in.-30 in. line. The contract goes to the larger combination.

The treatment plant has a rated capacity of 20 mgd, an initial maximum capacity of 40 mgd and an ultimate capacity of 55 mgd. It includes two 40,000-gal activated carbon slurry storage tanks, a chemical building, flash mixers, two 170-ft diam x 14-ft SWD Dorr clariflocculators, six filter beds of 1,170 sq ft of sand area each, pneumatic control of filters, office and laboratory quarters to be air-conditioned, hi-service pump station with three groups of three pumps each discharging into three separate transmission pipelines, two 160-ft diam filtered water reservoirs each with a capacity of 2.5 million gal. A railroad spur is also included.

Highway transportation is available to the pipeline and both highway and rail transport are at the treatment plant site. Minimum wages start at $1 for common labor. Dallas going rates include: common labor $1.50, carpenters $3.40.

Of the eleven bidders on the supply line P. C. Sorenson Co., Dallas, low by 3 percent, was more than 16 percent below the engineers' estimate. Bidders include:

36" vs 42" Pipe—Award to 42"

1	P. C. Sorenson Co., Dallas, Tex	$713,882
2	Brodie Construction Co.,	738,573
11	B. T. & G. Construction Co	1,092,882

Bids: 6-7-55		Quan-	Unit Prices	
Items	Unit	tity	1	2
RCP, 36"	lf	62,700	$10.45	$10.75
MJ cast iron pipe, 36"	lf	285	25.00	40.50
RCP, 20"	lf	1,720	6.00	6.60
14"	lf	1,710	4.20	4.45
CGM encasement pipe,				
boring or jacking, .54'	lf	235	60.00	65.00
in open cut, .54.	lf	50	20.00	26.00
Gate valve, 36"	ea	1	2,900	3,000
Air vlv installation, 3"	ea	18	320.00	248.00
2"	ea	1	270.00	199.00
Blow-off valves, 8"	ea	16	340.00	305.00
Flanged outlet,				
6" with 6" gate valve	ea	2	180.00	138.00
4" with 4" gate valve	ea	1	145.00	105.00
Service outlet,				
2" with 2" stop	ea	1	22.00	25.00
1" with 1" stop	ea	94	7.60	5.00
Concrete, Cl C	cy	110	14.00	23.00
Gravel base, 8"	sy	250	2.30	1.45
Concrete base, 8"	sy	50	7.00	4.70
6"	sy	10	6.00	3.55
Asph conc pavement, 2"	sy	35	3.00	7.50
1"	sy	15	2.60	5.00
Gravel backfill	cy	110	6.00	5.00

1C	P. C. Sorenson Co., Dallas, Tex	$890,910
2	Brodie Construction Co.,	921,458
11	B. T. & G. Construction Co	1,296,544

Bids: 6-7-55		Quan-	Unit Prices	
Items	Unit	tity	1C	2
RCP, 42"	lf	62,700	$13.20	$13.55
MJ cast iron pipe, 42"	lf	285	31.00	53.00
RCP, 20"	lf	1,720	6.00	6.60
RCP, 14"	lf	1,710	4.20	4.45
CGM encasement pipe,				
boring or jacking, 60"	lf	235	70.00	70.00
in open cut, 60"	lf	50	15.00	33.00
Gate valve, 42"	ea	1	3,100	4,435
Air vlv installations, 3"	ea	18	320.00	256.00
2"	ea	1	270.00	204.00
Blow-off valves, 8"	ea	16	340.00	289.00
Flanged outlet				
6" with 6" gate valve	ea	2	180.00	138.00
4" with 4" gate valve	ea	1	145.00	105.00
Service outlet				
2" with 2" stop	ea	1	22.00	28.00
1" with 1" stop	ea	94	7.60	7.00
Concrete, Cl C	cy	130	14.00	23.00
Gravel base, 8"	sy	290	2.30	1.45
Concrete base, 8"	sy	59	7.00	4.70
6"	sy	12	6.00	3.55
Asph conc pavement, 2"	sy	41	3.00	7.50
1"	sy	18	2.60	4.50
Gravel backfill	cy	130	6.00	5.00

30" vs 36" Pipe—Award to 36"

1	P. C. Sorenson Co., Dallas, Tex	$188,125
2	Brodie Construction Co.,	192,759
11	B. T. & G. Construction Co	298,251

Bids: 6-7-55		Quan-	Unit Prices	
Items	Unit	tity	1	2
RCP, 30"	lf	22,500	$8.20	$8.40
0-2' extra depth	lf	250	0.60	1.00
Blow-off valve, 8"	ea	3	340.00	285.00
Air vlv installation, 3"	ea	3	320.00	248.00
Service outlet, 2"	ea	1	22.00	25.00
Concrete, Cl C	cy	40	14.00	23.00
Gravel base, 8"	sy	50	2.30	1.45
Concrete base, 8"	sy	25	7.00	4.70
Asphaltic concrete, 2"	sy	20	3.00	7.50
1"	sy	55	2.60	5.00
Gravel backfill	cy	70	6.00	5.00

1C	P. C. Sorenson Co., Dallas, Tex	$239,070
2	Brodie Construction Co.,	244,952
11	B T. & G. Construction Co	369,766

Bids: 6-7-55		Quan-	Unit Prices	
Items	Unit	tity	1C	2
RCP, 36"	lf	22,500	$10.45	$10.70
0-2' extra depth	lf	250	0.60	1.10
Blow-off valve, 8"	ea	3	340.00	285.00
Air vlv installation, 3"	ea	3	320.00	248.00
Service outlet, 2"	ea	1	22.00	25.00
Concrete, Cl C	cy	50	14.00	23.00
Gravel base, 8"	sy	60	2.30	1.45
Concrete base, 8"	sy	30	7.00	4.70
Asphaltic concrete, 2"	sy	24	3.00	7.50
1"	sy	65	2.60	5.00
Gravel backfill	cy	84	6.00	5.00

Completion: 3-29-56, 270 calendar days, $50/day liquidated damages

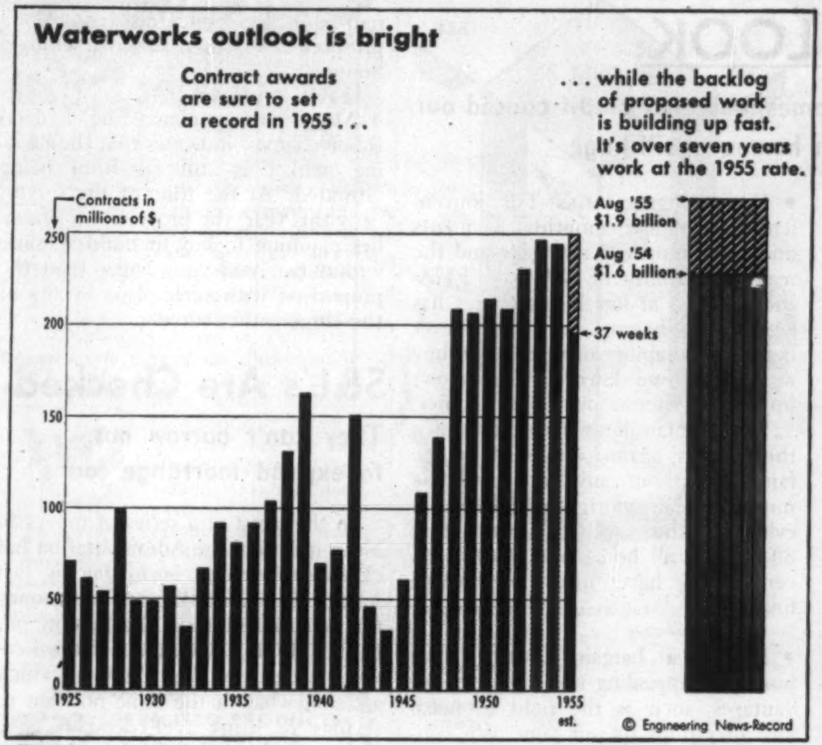
Of six bidders for the treatment plant contract, C. H. Leavell & Co., El Paso, was 6 percent under the engineers' estimate and 3 percent under the second low. Bidders include:

1C	C. H. Leavell & Co., El Paso, Tex	$2,257,063
2	E. E. Farrow Co., Dallas, Tex	2,336,930
6	Sira & Payne Construction Co., Dallas, Tex.	2,485,000
EE	Forrest & Cotton, Dallas, Tex	2,399,000

Bids: 6-7-55		Quan-	Unit Prices	
Items	Unit	tity	1C	2
Water treatment plant	ls	.....	$2,230,163	$2,298,980
Backfill, Cl C conc	cy	1,000	12.00	15.00
gravel	cy	2,000	3.00	4.00
sand-clay	cy	1,400	3.00	6.00
Tank piers Cl B RC	cy	80	40.00	35.00
Xtra ftage 20" pier, clp	lf	500	3.00	7.50

*RC reinforced concrete *clp comp

Completion: 450 calendar days, $100/day liquidated damages



Waterworks Aims at a Record

Waterworks awards are headed toward a record year in 1955. For the first 37 weeks of this year, total awards are almost $196 million, up 22% from last year at this time (chart) the backlog of proposed work stands at about $1.9 billion, over seven years' work at the estimated 1955 annual rate of $250 million.

• **Regions**—The West-of-Mississippi region, with about $55.6 million in contracts awarded during the first eight months of this year, is out in front of other areas. The total of this region so far is about 13% ahead of the same period in 1954.

The Mid-West comes next with a total of $50.3 million for the first eight months. This is nearly twice the 1954 figure. Waterworks contracts awarded during the first eight months total almost $24 million in the Far West (down 7% from last year), and $23 million in the Mid-Atlantic region (up 14%).

The South, with $14.4 million, is down 66% from the same period last year. Bringing up the rear is New England. Total awards there for the first eight months are $10.4 million—a 44% gain from last year.

• **Backlog**—The backlog of proposed work, as already noted, is enough to keep contractors going at the present record rate well into the 1960s. During the first eight months of this year alone, about $384 million worth of projects moved into ENR's backlog. This is almost double the amount of contracts that were awarded during the same period. And it is almost double the $195 million in projects reported as proposed during the same period last year.

Philadelphia Drops Plan For $100-Million Food Market

Philadelphia's projected $100-million food distribution market has been shelved after a long battle between the Greater Philadelphia Movement, which spearheaded the project and local financier Albert M. Greenfield.

For years, Philadelphians have wanted to do something about the city's present tiny, congested wholesale market. In 1953, the Greater Philadelphia Movement got surveys started. Finally, a 420-acre site was selected in the dilapidated Dock St. area in southeast Philadelphia. GPM set up a non-profit corporation to raise money to do the job, with some help from the city.

• **Picks holes**—However, in recent months Greenfield has been arguing that a $100-million project was too ambitious, figured it would lose $3 million a year. He suggested plans be cut to a cost of $50 million or $60 million. Further, he claimed that under the proposed plan the city was not getting enough voice in management in proportion to its investment. He also has charged that backers of the scheme are not putting up enough of their own money, and that they don't have enough tenants lined up to protect the city's investment.

Leaders of GPM have categorically challenged Greenfield's estimates with figures of their own. They claim food dealers moving into the center might expect to save over $3½ million a year. They also estimate that the city would get back about $1.8 million a year in taxes, as well as any excess revenues from the center.

Now, GPM has dropped the whole plan, blaming Greenfield.

Investor Sells 12,000 Shares Of Northwest Engineering Co.

An unknown owner of 12,000 shares of Class B (non-voting) common stock of Northwest Engineering Co., Chicago maker of construction equipment, has just sold this block of stock successfully at $28.25 per share in a secondary offering through Smith, Barney & Co., New York investment bankers.

AED Publishes Its Yearly Manual on Equipment Rentals

Associated Equipment Distributors has just completed its 1955 edition of the "green book," a compilation of rental rates for equipment.

The 80-page manual contains national average rental rates for about 2,000 items of construction machinery, as determined through a survey during the past three months among AED's 700 distributor members. It's available for $5.00 from Associated Equipment Distributors, 30 East Cedar St., Chicago, 11, Ill.

Cement Shortage May Delay Kentucky's 40-Mile Turnpike

A cement shortage may delay construction of the 40-mi stretch between Louisville and Elizabethtown on the Kentucky Turnpike. The section is scheduled to be finished Dec. 31. Dwight H. Bray, state chief highway engineer says this is the first time since World War II that his department's work has been hampered by lack of cement.

(*B&F continued on page 50*)

THE LONGER LOOK:

Bigger families, higher incomes, and easy credit caused our housing boom. Demand for homes is still huge

A strong trend toward home ownership, amounting almost to a social revolution, has accompanied the postwar housing boom. The increased desire—and financial ability—of American families to own their own homes probably is the biggest reason for the unbroken string of years since 1949 which have reached a million-plus new housing starts.

One-third more nonfarm families owned their homes early this year than in early 1948, according to a survey reported in the August issue of the Federal Reserve Bulletin. Since 1940 the number of home-owners has more than doubled—soaring from 11.4 million to almost 25 million. In percentage terms, roughly 60% of all dwelling units were rented in typical prewar years; now over 55% are owned by their occupants.

The 1955 Survey of Consumer Finances, conducted by the Federal Reserve System in cooperation with the Survey Research Center of the University of Michigan, lists as principal reasons for the growth in home ownership:

1. Changes in family composition.
2. Changes in income status.
3. Favorable mortgage terms.

- **Bigger families**—The second, third and fourth babies in our annual crop of some four million (ENR May 20, 1954, p. 162) have been forcing the seams of apartments and creating space problems that can be solved only through home ownership. Homeowners usually have more rooms than renters of similar age, income and family size besides having more garage, basement and storage space. According to the survey, families having less than one room per person expressed dissatisfaction with present quarters more than twice as frequently as families with more space.

- **Higher incomes**—The percentage of nonfarm families with incomes of $4,000 or more has climbed from only 35% in 1949 to 55% in early 1955. And this is the range where families are more likely to own than rent.

Of those families with incomes of $7,500 and over—the category in which the percentage of families has doubled since 1949—three out of four families own their homes.

- **Easy mortgage terms**—The convenience of regular monthly payments under an amortized mortgage and the ready availability of VA- and FHA-backed loans at low interest rates has made home-buying easier than ever before. The ability of veterans to buy with little or no down payment shows up in the home ownership figures: 52% of the families with veterans own their homes, against only 43% of the families without any veterans. The importance of mortgage financing is evident in the survey's indication that 80-85% of all home purchases in recent years have involved mortage financing.

- **Buying a bargain**—Owning your home has appealing non-monetary advantages, such as the right to make any alterations to suit your own convenience and the pride of possession. But a cold analysis of costs, month-to-month, has also given ownership the nod over renting in many areas.

The Bureau of Labor Statistics, in two issues of the Monthly Labor Review last fall (September and October), presented the results of a study of monthly costs of owning and renting new housing in 1949-50.

BLS compared rents for new dwellings with the mortgage payments and regularly recurring expenses of buying and came up with these conclusions:

- Comparisons of total monthly outlays tended to confirm the prevalent opinion that it was less expensive to buy.
- Renting consistently cost more than owning in Chicago, Dallas, Detroit, New York and Pittsburgh.
- However, buying consistently cost more in Atlanta, San Francisco and Washington.

The difference between rental and buying costs were frequently as much as $10 a month, but figuring in the closing costs and such items as the equipment owners must furnish for themselves often cancelled out the monthly cash advantage. Cash down payments also were not included in the BLS calculations. Even so, the study gave plenty of support to popular supposition that buying is cheaper.

Add to this the realization on the part of home-buyers that their mortgage payments contribute to building their equity in the property—while rent money is gone forever—and the prospect of capital gains on reselling a house.

- **More buying plans**—The Federal Reserve survey indicates that the housing market is still far from being saturated. At the time of the survey, early this year, the proportion of families planning to buy or build a house within two years was larger than the proportion with such plans in any of the three earlier surveys.

S&L's Are Checked

They can't borrow now to expand mortgage loans

In the latest of a series of moves to block inflation, the Administration has clamped down on borrowing by savings & loan associations to get money for mortgage lending. From now on, the 11 Home Loan Banks of the Federal Home Loan Bank System (which are somewhat in the same position to savings & loans as Federal Reserve Banks are to commercial banks) will lend no more money to their member associations, unless the funds are absolutely needed to meet previous mortgage commitments. Otherwise, the savings & loans that are members of the system will have to rely strictly on their own incoming receipts when they lend money on home mortgages.

At the end of the first week in September, member associations were in hock a record total of $1.2 billion to their Home Loan Banks, as compared with about $659 million a year ago.

In the first half of this year, the S&L's made $5.8 billion of new home loans, compared to $4 billion last year. In the same period, new savings were $2.6 billion, as against $2.3 billion in the first half of 1954. In other words, mortgage loans have been increasing much faster than incoming funds—and the difference has been made up by borrowing.

The Home Loan Bank Board has been warning members on this for the past two months. Recently, most district banks have boosted the rates they charge members on loans. In some cases, the rate boost was as much as ½%.

A study committee of the U. S. Savings & Loan League, of which many S&L's are members, recently warned that: "The desire for rapid growth of the part of some savings association managers should not be allowed to interfere with . . . adequate earnings and the building of reserve strength."

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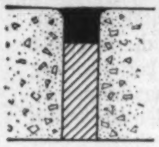

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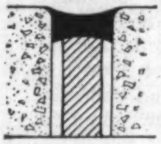

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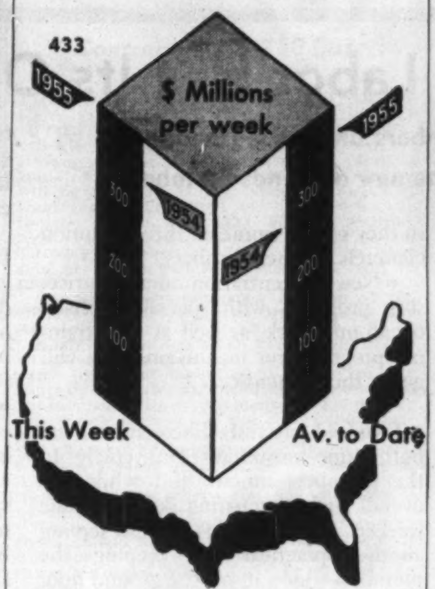
Activity This Week

As reported to ENR
(in millions of dollars)



Amount of contracts let

(millions of dollars)

By Ownership	This Week	Cumulative 38 wks 1955	1954	% chge
Federal	$19.8	$1,252.0	$900.4	+39
State and municipal	127.9	3,978.4	3,635.7	+9
Total public	147.7	5,230.4	4,536.1	+15
Total private	285.3	8,637.7	6,058.2	+43
U. S. Total	$433.0	$13,868.1	$10,594.3	+31

By type of work

	This Week	1955	1954	% chge
Waterworks	$5.8	$201.3	$164.4	+22
Sewerage	8.4	297.6	276.6	+8
Bridges	14.4	346.6	381.5	—9
Highways	69.2	1,628.4	1,401.9	+16
Earthwork, waterways	3.6	379.5	204.9	+85
Buildings:				
Public, excl. hsg.	23.2	1,282.9	1,287.4	—0.3
Public housg.	3.9	220.5	176.4	+25
Private housg.	192.0	4,705.2	3,154.2	+49
Commercial	22.1	1,256.1	991.9	+27
Industrial	59.5	1,992.8	1,431.0	+39
Unclassified	30.9	1,557.2	1,124.1	+39
U. S. Total	$433.0	$13,868.1	$10,594.3	+31

NOTE: Minimum size projects included are: Waterworks and waterways, $44,000; other public works, $73,000; industrial buildings, $93,000; other buildings, $344,000.

New capital for construction

(millions of dollars)

	Week of Sept. 15	Cumulative 37 Wks 1955	% Chge '54-'55
Corporate securities	$107.1	$2,399.3	+15
State and municipal:			
All except housing	53.5	2,935.9	—23
Housing	...	72.0	—21
Federal loans	2.0	92.3	+11
Federal aid	...	853.5	+27
Total nonfederal	$162.7	$6,353.0	—6
Federal appropriations:			
In U. S.	...	$3,379.7	+63
Outside U. S.	...	84.6	+155
Total new capital	$162.7	$9,817.3	+11

ENR cost and volume indexes, 1955

Base years = 100

		1913	1926	1949
Construction cost	9/15	672.86	323.44	141.05
	9/1†	672.80	323.41	141.04
Building cost	9/15	479.40	259.15	136.27
	9/1†	479.21	259.05	136.22
Volume	Aug.	508	207	147
	July	699	284	202

† Official ENR Indexes for Sept.

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Atomic Energy: Labor Has Its Own Blueprints

Martin Durkin and the plumbers union spearheaded efforts of the AFL to meet the new demands on labor

Stacked in rows across a workroom at the headquarters of the AFL's United Association of Plumbers and Pipefitters are a series of large, colorful and complicated charts. They are blueprints for the construction of atomic energy reactors.

Each chart breaks down the division of parts going into atomic machines, complete with multi-colors defining the jobs to be handled by the various AFL craft unions.

Together, they symbolize labor's preparations for the atomic era.

They contain vital atomic information gleaned from the security-conscious Atomic Energy Commission. And they're the guides for training the future atomic workforce.

• **Durkin's role**—The charts are handiwork of highly-skilled technicians of the plumbers union, but the end-product is the result of a two-year campaign by its president, Martin P. Durkin. Durkin has been the prime mover in readying his union—and the AFL parent organization—for the demands on labor that will come with the wedding of private industry and the atom.

Throughout his career as chief of the plumbers union, he has concentrated on apprentice programs to provide a skilled work force that could keep abreast of new industrial equipment. With this background, he was well aware that members of his union—and others—were totally unprepared to wrestle with the new materials and techniques involved in atomic work.

• **Results**—So Durkin decided to do something about it and now, two years later, he can show these results:

• Under Durkin's prodding, the AFL at its Los Angeles convention authorized formation of a permanent atomic energy committee to anticipate the manpower and skills needed for atomic production. Headed up by AFL president George Meany, with Durkin and other leaders of AFL affiliates as members, it strives to keep abreast of atomic energy developments and to keep its membership informed.

• Close, almost daily, contact between plumbers, Atomic Energy Commission and private companies to keep tabs on new atomic techniques so they can be funneled through union channels to the members.

• New concentration on apprenticeship programs with special emphasis on atomic work, as well as new training programs for technicians who will guide the apprentices.

• **Two-fold interest**—These efforts are both time-consuming and costly to the plumbers union. But while the overall goal is preparing skilled atomic workers, current efforts are also serving another practical end—keeping the plumbers union in on the ground floor so its members will be assured work in the new field, as well as protecting their jurisdiction.

Both factors are present in the union's efforts, through which it hopes to keep down the costs of atomic energy development. The more cheaply energy can be produced, the greater will be its use in private industry. Result will be more work for plumbers and pipefitters.

And in the economic field, labor has minced no words in expressing its views on the public's interest in atomic energy.

Pointing out that nuclear research and development has been largely the result of public effort—and the use of public funds—it has urged that the benefits be made available to all. In addition, it has recommended thorough exploration of the economic and social consequences of any proposed use of atomic energy preliminary to the exercise of licensing authority and control, in order to prevent any serious economic dislocation.

• **A challenge**—The AFL was quick to recognize that the demands on new work skills are enormous. For instance, in the construction of an atomic reactor, the pipefitter must install a new and costly type of pipe and work with new materials, such as titanium and plutonium—materials that most of the craft have never used before. And an old technique, welding, must be developed to an exact science with no room for error.

Getting the information necessary to train union members has been one of the toughest jobs. Officials of the plumbers, as well as of the AFL boilermakers union which is also firmly entrenched in its own preparatory program, say that clearance of critical facts from the AEC has held back their efforts.

But, bit by bit, this vital information is being de-classified, and last year's new atomic energy law releasing data to private industry has helped to open the door that's enabled the union to draft its plans.

• **Other problems**—There are other concurrent problems for organized labor in atomic energy. The dangers of radiation, safety standards, new inspection techniques, new federal laws to protect the workers, and collective bargaining difficulties are some of them.

The AFL's atomic committee is currently studying workmen's compensation laws to determine the protection afforded a worker injured by radiation. A technical problem is whether the statute of limitations in the law prevents help to a worker affected by long-delayed radiation.

In the field of collective bargaining, new problems have arisen, especially at AEC installations. Labor has found that security restrictions hamper organization and impair normal negotiations with operating contractors, and that effective use of economic action is made difficult if not impossible.

• **Training emphasized**—But the emphasis by Durkin's union is on training. This month, under sponsorship by the plumbers, the University of California is opening courses in Berkeley for union apprentice coordinators in atomic energy (ENR Aug. 25, p. 80). The union will soon open a "pilot school" in Washington for teacher training, designed for union business managers and agents.

Last month, the plumbers held a week-long apprentice contest among its members at Purdue University in Indiana, and combined the contest with atomic energy instruction from the AEC and officials of manufacturing firms. According to George Glasheen, education director of the AEC, it was the first conference on peacetime uses of atomic energy ever sponsored by a trade union.

Apprentice training is necessarily a slow, and thorough process, but Durkin has laid the groundwork for keeping labor up to date in atomic energy, ready to take part when the time comes.

U. S. Government

NAME AND LOCATION OF PROJECT—Project No. 53-103, Additional Section of Intercepting Sewer Charlotte Amalie, St. Thomas, Virgin Islands. DEPARTMENT OR AGENCY—OFFICE OF TERRITORIES, DEPARTMENT OF THE INTERIOR, by (issuing office) Division of Insular Affairs, Office of Territories, Department of the Interior, Room 6412 Interior Building, Washington 25, D. C. Sealed bids in single copy for furnishing all labor, equipment, and materials and performing all work for the project described herein will be received until 3:00 P.M. Atlantic Standard Time, October 20, 1955, in the Office of the Director, Virgin Islands Public Works, Division of Insular Affairs, Office of Territories, Department of the Interior, Charlotte Amalie, St. Thomas, Virgin Islands and then publicly opened and read aloud. Information regarding bidding material, bid guarantee, and bonds, plans and specifications and other proposed contract documents are open for public inspection at the office of the Director, Virgin Islands Public Works, Division of Insular Affairs, Office of Territories, Department of the Interior, Charlotte Amalie, St. Thomas, Virgin Islands; R. L. Kenan & Associates, Consulting Engineers, Bell Building, Montgomery, Alabama; Lester M. Marx, Room 2713 Interior Building, Washington 25, D. C.; Housing and Home Finance Agency, Room 313 N. Y. Department Store Building, 1064 Ponce de Leon, Santurce, Puerto Rico; A.G.C. Office, 1113 Congress Building, Miami, Florida; Builders Exchange, 46 Northeast 6th Street, Miami, Florida; F. W. Dodge Corporation, 119 West 40th Street, New York 18, N. Y.; and A.G.C. Office at Palm Beach, Florida. Plans and specifications may be procured from the office of R. L. Kenan & Associates, Consulting Engineers, Bell Building, Montgomery, Alabama, upon deposit of $20.00. Deposit shall be only by certified check payable to the Treasurer of the United States, which will be refunded to bona fide bidders upon the return of plans and specifications in good condition within thirty (30) calendar days from the date of bid opening. A bona fide bidder includes any person who submits a bid for a general contract, but does not include a person who submits a quotation to the general contract bidders. To persons who procure plans and specifications upon payment of $20.00 and who do not submit a bid, $15.00 will be refunded upon the return thereof, in good condition, within thirty (30) calendar days from the date of bid opening. No refund will be made for return after that time. Bonds, etc.—Each bid must be accompanied by a satisfactory bid guaranty in an amount not less than 5 percent of the total bid. The successful bidder will be required to furnish a performance bond and payment bond, each in the amount of 100 percent of the contract price. No bid may be withdrawn until thirty (30) calendar days after the scheduled closing time for the receipt of bids. The Government reserves the right to waive any informality and to reject any or all bids, when such is in the interest of the Government. Description of Work—The construction of an additional section of the intercepting sewer, paralleling the existing 18-inch V.C. intercepting sewer, or meandering in the same general direction, from the vicinity of NY Tvaer Gade to the Lift Station near the French Village which includes the following approximate quantities: 1 Reinforced Concrete Grit Chamber, 11 Concrete Manholes (0 to 14 depth), 260 Lin. Ft. 8" Pipe (Hauling and Installing Only), 500 Lin. Ft. 10" Pipe (Hauling and Installing Only), 1,070 Lin. Ft. 18" Pipe (Hauling and Installing Only), 440 Lin. Ft. 20" Pipe (Hauling and Installing Only). The cast iron sewer pipe will be furnished at St. Thomas, Virgin Islands from Government surplus. The majority of trench for 18" and 20" sewer will be in dredged fill and the pipe invert will be approximately 6' to 8' below sea level in trenches 8' to 12' deep.

OFFICIAL PROPOSAL

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Contract NYA-750.001

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UTILITIES FOR MEDICAL BUILDING

Sealed proposals for furnishing and installing utilities to the site of the Medical Building at New York International Airport will be received at the office of the Chief Engineer of The Port of New York Authority, Room 1100, 111 Eighth Avenue, New York 11, N. Y., until 2:30 P.M. on Tuesday, October 11, 1955, at which time said proposals will be opened and read in Room No. 1108.

Contract documents may be seen at the office of the Engineer of Materials of the Authority, Room 1112. Documents will be furnished upon deposit of $30.00 per set for not more than three sets to any one company (each set including one copy of the contract drawings). Additional sets will be furnished upon payment of $30.00 per set, which payment is not returnable. Deposits and payments shall be delivered to the Treasury Department, Room 1001, where a receipt in duplicate will be issued. A copy of the receipt shall be delivered to Room 1112, where the documents will be furnished.

Those who have submitted a bid on the contract will receive a refund of the deposit for each set of documents, not exceeding three, returned within forty days after the opening of proposals. Those who have not submitted a bid will receive a refund of one-half of the deposit for each set of documents, not exceeding three, returned within forty days after the opening of proposals.

THE PORT OF NEW YORK AUTHORITY
Donald V. Lowe, Chairman

New York, September 22, 1955

Bids: October 11, 1955

Pennsylvania Turnpike Commission
Harrisburg, Pennsylvania

NOTICE TO BIDDERS

Sealed proposals will be received by the Pennsylvania Turnpike Commission, through the Chairman, 11 North Fourth Street, Harrisburg, Pennsylvania, until 10:00 a.m., Eastern Daylight Saving Time, the 11th day of October 1955, and immediately thereafter will be taken to the Public Utility Commission's Hearing Room No. 1, North Office Building, State Capitol, Harrisburg, Pennsylvania, and publicly opened and read aloud for the following contract:

For the construction of structures and the grading, drainage, and paving of the Turnpike Section 37K, part of the Northeastern Extension of the Pennsylvania Turnpike in Taylor Borough, City of Scranton and Ransom Township, Commonwealth of Pennsylvania. This section being situated as follows:

Beginning at a point approximately 643 lineal feet southeast of the center line intersection with Legislative Route 35055 at Turnpike Station 140+33.27 in Taylor Borough, Lackawanna County; thence in a northeasterly direction 23,926 lineal feet more or less through an equality to Turnpike Station 379+75 at a point approximately 738 lineal feet southwest of the center line intersection with existing Legislative Route 952 in the City of Scranton, Lackawanna County a distance of approximately 4.53 miles.

The approximate quantities of the principal items are as follows:

Class 1 Excavation	1,490,918 cu. yds.
Class 1A Excavation	96,843 cu. yds.
Class 2 Excavation	32,884 cu. yds.
Class 2A Excavation	3,945 cu. yds.
Special Subgrade	199,767 sq. yds.
Reinforced Concrete Pavement	128,250 sq. yds.
Class A Concrete	3,500 cu. yds.
Class B Concrete	7,615 cu. yds.
Plain Steel Bars	1,666,970 lbs.
Fabricated Structural Steel	1,652,350 lbs.
Median Divider	21,832 lin. ft.
Cast-in-place Concrete Piling	6,904 lin. ft.

OFFICIAL PROPOSALS

Copies of plans, specifications and other contract documents, including cross-sections, are on file and open to public inspection at the office of the Pennsylvania Turnpike Commission located at Harrisburg, Pennsylvania, on 21 September 1955. Plans, specifications, cross-sections and other contract documents will be available by this date for inspection or for mailing to prospective bidders. Copies of Specifications for grading, drainage, paving and structures may be purchased from the Pennsylvania Turnpike Commission for the sum of five (5) dollars per copy. Copies of cross-sections may be purchased from the Pennsylvania Turnpike Commission for the sum of fifty (50) dollars per set.

Plans and contract documents, for this section exclusive of cross-sections and specifications, may be purchased from the Pennsylvania Turnpike Commission for the sum of twenty (20) dollars for each set. No refund will be made for plans and/or contract documents returned unless the project is withdrawn from letting by the Pennsylvania Turnpike Commission.

Remittances are payable by check or P. O. money order to the Pennsylvania Turnpike Commission and must accompany requests for drawings, specifications, contract documents, and cross-sections.

The character and amount of bid security to be furnished by the bidder is stated in the Instructions to Bidders.

The Commission reserves the right to waive any informalities in or to reject any or all bids.

No bids may be withdrawn for thirty (30) days after the scheduled closing time for receipt of bids.

PENNSYLVANIA TURNPIKE
COMMISSION
James F. Torrance
Secretary and Treasurer

Harrisburg, Pennsylvania

Bids: October 11, 1955

Contract NYA-740.001

ADVERTISEMENT

THE PORT OF NEW YORK AUTHORITY
NEW YORK INTERNATIONAL AIRPORT
ALTERATIONS TO PARKING LOT

Sealed proposals for construction of a register booth and installation of treadles and registers at the public parking lot at New York International Airport will be received at the office of the Chief Engineer of The Port of New York Authority, Room 1100, 111 Eighth Avenue, New York 11, N. Y., until 2:30 P.M. on Tuesday, October 11, 1955, at which time said proposals will be opened and read in Room 1108.

Contract documents may be seen at the office of the Engineer of Materials of the Authority, Room 1112. Documents will be furnished upon deposit of $30.00 per set for not more than three sets to any one company (each set including one copy of the contract drawings). Additional sets will be furnished upon payment of $30.00 per set, which payment is not returnable. Deposits and payments shall be delivered to the Treasury Department, Room 1001, where a receipt in duplicate will be issued. A copy of the receipt shall be delivered to Room 1112, where the documents will be furnished.

Those who have submitted a bid on the contract will receive a refund of the deposit for each set of documents, not exceeding three, returned within forty days after the opening of proposals. Those who have not submitted a bid will receive a refund of one-half of the deposit for each set of documents, not exceeding three, returned within forty days after the opening of proposals.

THE PORT OF NEW YORK AUTHORITY
Donald V. Lowe, Chairman

New York, September 22, 1955

U. S. Government

DEPARTMENT OF THE INTERIOR, Bureau of Reclamation. Sealed bids (Specifications No. DC-4519) will be received at Cody, Wyoming, until October 4, 1955, for furnishing labor and materials for removal of rock debris and repair of Shoshone Power Plant, Shoshone Project, Wyoming. Location near Cody, Wyoming. Principal items are 5,000 cu. yds. removing rock debris from river channel; repairing power plant roof which includes 20 cu. yds. of concrete, excavation of 40 cu. yds. of concrete, and installing 360 sq. yds. of waterproofing; and other work. Completion time 100 days. For particulars, address Bureau of Reclamation, Building 53, Denver Federal Center, Denver, Colorado. W. A. Dexheimer, Commissioner.

OFFICIAL PROPOSALS

Bids: September 29, 1955

Construction of 30-Inch Diameter Water Supply Main Arlington County, Virginia

ADVERTISEMENT FOR BIDS

Sealed proposals for furnishing all materials and equipment and doing all work required for the construction of 30-inch diameter water supply main, as described below, will be received by the Purchasing Agent in Room 213, in the Court House Building at Arlington County, Virginia, until 11:00 A.M., Eastern Daylight Savings Time, on September 29, 1955, and there publicly opened and read immediately thereafter:

CONTRACT 2.

CONSTRUCTION OF 30-INCH DIAMETER WATER SUPPLY MAIN AND APPURTENANCES.

1. Location: The work is located in Arlington County, Virginia, on public streets from 1st Place N. to Columbia Pike.

2. Type of Work: The principal items of work include the following:

Approximately 4500 lin. ft. of 30-inch steel or reinforced concrete water pipe together with manholes, 18-inch diameter cone valves, miscellaneous gage valves, blow-off, air release or inlet valves, connections to existing water mains, etc.

3. Copies of Plans and Specifications, Information for Bidders, Bid Forms and other bidding and contract documents may be examined at the office of the Chief Engineer of the Water Division, County Court House, Arlington, Va.; at Dodge Reports, 900 F. Street, N.W., Washington, D. C., and at the office of ALEXANDER POTTER ASSOCIATES, CONSULTING ENGINEERS, 50 CHURCH ST., NEW YORK (7), N. Y.

4. Copies of Plans, Specifications and Bidding Documents may be obtained from the Purchasing Agent in Room 213, Court House Building at Arlington, Virginia, upon deposit of THIRTY ($30.00) DOLLARS PER SET.

Full refund will be made to actual bidders for return of One (1) Set, in good condition, within two weeks after closing date for receipt of bids; refund for return of all other sets, in good condition, WITHIN THE SAME PERIOD, will be Fifty (50%) percent of the deposit. No refund will be made for return of documents in poor condition or later than the two week period stipulated.

All bids must be on the form contained in the Contract and Specifications.

Contractors, whether resident or nonresident in Virginia will be required to show evidence of a certificate of registration as required by Chapter 7 of Title 54 of the Code of Virginia before their bids will be considered, if the bid is $20,000 or more.

All bids must be accompanied by a certified check or acceptable bidder's bond in an amount of not less than Five Per Cent (5%) of the amount of the bid, made payable to the Treasurer of Arlington County, as bid security.

The successful bidder will be required to furnish a Performance Bond conditioned upon the faithful performance of the Contract and upon payment of all persons supplying labor and furnishing materials on the construction of the work.

No bidder may withdraw his bid within Thirty (30) days after actual date of opening thereof.

The County Board of Arlington County, Virginia, reserves the right to reject any or all bids and to waive any informality in the bids.

ARLINGTON COUNTY, VIRGINIA
By: A. T. Lundberg
County Manager

Bids: October 11, 1955

Indiana Toll Road Commission 309 W. Washington Street Old Trails Building Indianapolis, Indiana

NOTICE TO BIDDERS
Contract No. C-1A

Sealed proposals will be received by the Indiana Toll Road Commission at or before 10:00 A.M., Central Standard Time, October 11, 1955 for the performance of the contract enumerated above.

The grading, drainage, structures, paving and roadway lighting of approximately 0.6 miles in Construction Section C-1A of the Indiana East-West Toll Road beginning at the Indiana-Illinois State Line at Toll Road Centerline Station 234+11.08 and extending southeasterly to a point about 1,900 feet south of a point on the centerline of Indianapolis Boulevard at Toll Road Centerline Station 264+00 in Lake County, Indiana. The approximate quantities of the major items of construction are as follows:

Borrow	202,000 Cu. Yds.
10" Reinforced Concrete Pavement	22,200 Sq. Yds.
9" Cement Concrete Base	13,000 Sq. Yds.
Culvert Pipes and Underdrains	3,200 Lin. Ft.
Cast-in-Place Concrete Piling	40,300 Lin. Ft.
Reinforcing Steel	1,211,000 Lbs.
Concrete for Structures	6,530 Cu. Yds.
Fabricated Structural Steel	5,327,000 Lbs.
Metal Handrail	1,600 Lin. Ft.
Roadway Lighting	65 Units
Under-Structure Lighting	172 Units

Copies of the Plans, Specifications and Proposal Forms for said Contract are available for public inspection or purchase at the office of the Chief Engineer, Indiana Toll Road Commission, 309 W. Washington Street, Indianapolis, Indiana. These documents may be purchased from said Chief Engineer for the following sums, per set, which sums are non-returnable:

Standard Specifications for the Indiana East-West Toll Road	$ 5.00
Plans, Special Provisions and Proposal Forms per set, per Construction Section	$25.00
Informational Drawings	
Cross Sections, per set, per Construction Section	$25.00
Soil Plan and Profiles, per set, per Construction Section	$ 5.00

NOTICE TO BIDDERS

All proposals must be on the form prescribed by the Commission and must comply with the terms and conditions set forth in the Contract Documents.

Contractor's statement for qualification on the forms supplied by the Commission will be required from all Bidders.

Each Proposal must be accompanied by a Proposal Guaranty in the amount of five (5%) per cent of the total price bid for the Contract. The Proposal Guaranty shall be in the form of an acceptable surety bond or a certified check on a solvent bank.

If the Bidder is an out of state corporation, he shall be required to furnish a certificate from the Secretary of State of Indiana as evidence that the corporation has complied with the Indiana Foreign Corporation Statutes, and that the corporation is authorized to transact business in the State of Indiana.

All bids must be received at or before 10:00 A.M., Central Standard Time, October 11, 1955, in the offices of the Indiana Toll Road Commission, 309 W. Washington Street, Indianapolis, Indiana. At said hour, the bid box will be publicly opened and the bids read.

The award of the above Contract, if any award be made, will be to the Bidder or Bidders whose Proposal is lowest and best for the performance of the work, taken as a whole, and complies with all the prescribed requirements. The Commission reserves the right to reject any or all Proposals and to waive technicalities.

INDIANA TOLL ROAD COMMISSION
Charles W. Keating, Secretary-Treasurer
Dr. Dillon Geiger, Chairman

Notice

ENGINEERS AND ARCHITECTS WANTED IN IRAQ

The Government of Iraq—Ministry of Communications and Public Works, invites the attention of engineers and achitects who are interested to serve with the Government of Iraq and who have had at least 3 years practical experience in these fields to the following vacancies:

No. of Vacancies	Position	Degrees	Monthly Salary
2	Architectural Engineers	B. Arch. or Dipl. in Arch.	bet. ID 150.00* and 250.00 for two years
1	Structural Engineer	B. Sc. or M. Sc.	do.
2	Surveyors	Associate of the Royal Institute of Chartered Surveyors	do.

* Iraqi Dinar = $2.80

Those interested should submit their applications in duplicate to the Embassy of Iraq, Washington, D.C., and give the following information:

1) Certified copies of degrees and diplomas.
2) Letters of recommendation from governmental agencies and engineering firms.
3) The period which applicant desires to serve in Iraq.
4) Age and marital status.
5) Salary requested.
6) Information on and samples of applicant's previous work and experience in the fields in question.

Further information can be obtained from the Embassy of Iraq, 2135 Wyoming Avenue N.W., Washington, D.C.

Bids: September 27, 1955

The Hydro-Electric Power Commission of Ontario

ST. LAWRENCE POWER PROJECT
CONSTRUCTION OF CORNWALL DYKE CLOSURE AND
DIVERSION OF CORNWALL CANAL

SEALED TENDERS, in quadruplicate, addressed to the undersigned, 620 University Avenue, Toronto 2, Ontario, and clearly marked

"TENDER FOR ST. LAWRENCE POWER PROJECT CONSTRUCTION OF CORNWALL DYKE CLOSURE AND DIVERSION OF CORNWALL CANAL"

will be received up to 4:30 o'clock p.m., Eastern Daylight Saving Time, on

TUESDAY, SEPTEMBER 27, 1955

for approximately 1,300,000 cubic yards of common excavation, 11,000 cubic yards of rock excavation, 1,100,000 cubic yards of earth fill and 137,000 cubic yards of concrete mixing and placing. All the work is in and adjacent to the Cornwall canal approximately two miles west of Cornwall, Ontario.

The work comprising dry excavation, construction of cofferdams, diversion structure and dyke closure, is to be completed not later than November 1, 1957.

Copies of the tendering documents may be obtained on or after September 9, 1955, at the office of the Director of Supply, 620 University Avenue, Toronto 2, Ontario, on payment of $25.00 for each set. This charge will not be refunded.

Tendering documents may be inspected at the above location and at the offices of the following: the Commission's Field Office, Cornwall, Ontario; Power Authority of the State of New York, 270 Broadway, New York 7, New York; and Uhl, Hall and Rich, 230 Congress Street, Boston 10, Massachusetts.

Tenders must be accompanied by a certified cheque drawn on a Canadian chartered bank for the sum of five hundred thousand dollars ($500,000). Provisions for the return of the cheque appear in the tendering documents.

The successful tenderer will be required to furnish a performance bond in the form approved by the Commission and issued by a bonding company licensed as such in the Province of Ontario and acceptable to the Commission for one hundred per cent (100%) of the total amount of the contract.

The lowest or any tender will not necessarily be accepted.

E. B. EASSON
Secretary

U. S. Government

DEPARTMENT OF THE INTERIOR, Bureau of Reclamation. Sealed bids (Specifications No. DC-4511) will be received at Medford, Oregon, until October 27, 1955, for furnishing labor and materials for earthwork, pipeline, and structures, Bear Creek Siphon, Medford Canal Rehabilitation, Medford Irrigation District, Rogue River Basin Project, Oregon. Location near Phoenix, Oregon in Jackson County. Principal items are 3,900 cu. yds. excavation and backfill of pipe trench; 600 lin. ft. furnishing and laying 600 lin. ft. 12-inch irrigation pipe; 1,800 lin. ft. furnishing and laying 48-inch diameter concrete pipe (pressure or cylinder, prestressed); and other work. Completion time 115 days. For particulars, address Bureau of Reclamation, 33 North Riverside, Medford, Oregon; or Building 53, Denver Federal Center, Denver 2, Colorado. W. A. Dexheimer, Commissioner.

DEPARTMENT OF THE INTERIOR, Bureau of Reclamation. Sealed bids (Specifications No. DC-4520) will be received at Medford, Oregon until November 1, 1955, for furnishing labor and materials for earthwork, pipe lines, and structures, Main Canal Structures, Medford and Rogue River Valley Irrigation District, Rogue River Basin Project, Oregon. Location east of Medford, Oregon. Principal items are 6,600 cu. yds. excavation; 277 cu. yds. concrete; 1,125 lin. ft. precast-concrete pressure pipe, 54- and 60-inch; 2,280 pounds miscellaneous metalwork; and other work. Completion time 450 days. For particulars, address Bureau of Reclamation, 33 North Riverside, Medford, Oregon; or Building 53, Denver Federal Center, Denver 2, Colorado. W. A. Dexheimer, Commissioner.

OFFICIAL PROPOSALS

Bids: October 19, 1955

Power Authority of the State of New York

ST. LAWRENCE POWER PROJECT
ADVERTISEMENT FOR PROPOSALS
FOR
THE FURNISHING AND DELIVERY OF GANTRY CRANES AND TRAVELING CRANE FOR
BARNHART ISLAND POWER PLANT
SPECIFICATION NO. PA-5-15050
ST. LAWRENCE CONTRACT NO. P20

NOTICE TO CONTRACTORS: THE POWER AUTHORITY OF THE STATE OF NEW YORK will receive sealed proposals for the design, manufacture, and furnishing of one 300 ton gantry crane, one 90 ton gantry crane, and one 150 ton traveling crane and delivery thereof f.o.b. destination as follows:

(1) If delivered in person on the day of receiving bids, until 10:30 A.M. Eastern Daylight Saving Time on the 19th day of October 1955, in Hearing Room C on the 6th floor, 270 Broadway, New York 7, New York.

(2) If mailed in, until 10:15 A.M. Eastern Daylight Saving Time on the 19th day of October, 1955 at the Authority's Office, 270 Broadway, Room 1300, New York 7, New York.

The proposals will be publicly opened and read aloud at the time and at the address given in (1) above.

Bids will be entertained for any one, any two, or all three of the cranes, in accordance with the bidding schedules. Erection at the site of installation will be done by Others.

Plans, specifications and Proposal Forms for the work will be on file in the Authority's office and in the offices of the Engineer, Uhl, Hall & Rich, 230 Congress Street, Boston 10, Massachusetts, and the Hydro-Electric Power Commission of Ontario, 620 University Avenue, Toronto 2, Ontario, may be inspected by prospective bidders during office hours and may be obtained from the Power Authority of the State of New York, 270 Broadway, Room 1300, New York 7, New York, upon application and prepayment of a fee of Twenty ($20.00) dollars per initial set of contract documents and Ten ($10.00) dollars per set for additional sets, no part of which will be refunded. Two sets must be returned with each bid.

Bids must be made in duplicate upon the proposal forms included in and bound with the Contract Documents. A bid deposit will be required with each bid in an amount not less than 10 percent of the maximum price bid for any bid schedule.

Bids will not be restricted to American manufacturers.

The right is reserved to reject any and all bids.

W. S. CHAPIN
GENERAL MANAGER

Bids: October 10, 1955

Fairfax County, Virginia Integrated Sewerage System

(Advertisement for Bids)

Sealed bids will be received at the Office of the Sanitary Engineer, County of Fairfax, Fairfax, Virginia, until Monday, October 10, 1955, at 2:00 P.M. E.S.T. for the construction of Contract No. 37-C: Approximately 5900 lin. ft. of 33 and 48-in. sanitary sewers and appurtenances.

Plans and contract documents may be examined and copies thereof obtained at the Office of the Sanitary Engineer, upon payment of $10.00 per set, which shall not be returnable.

Contractors, whether resident or non-resident in Virginia, will be required to show evidence of a Certificate of Registration as required by Chapter 7 of Title 54 of the Code of Virginia before their bids will be considered.

Each bid must be accompanied by cash, certified check, or by an acceptable bidder's bond in an amount not less than (5%) of the amount of the total bid. The successful bidder will be required to furnish a performance and maintenance bond in a penal sum equal to the full contract price.

No bid may be withdrawn for a period of (30) days after the opening thereof and the right is reserved to waive any informality therein and to reject any or all bids.

Harry L. Hale
Sanitary Engineer
Dated: September 9, 1955

OFFICIAL PROPOSALS

Bids: October 4, 1955

Village of Wilmette, Illinois

NOTICE TO BIDDERS

Sealed bids will be received by the Village of Wilmette, Illinois, at the office of the Village Clerk in the Village Hall at Central Avenue and Wilmette Avenue, Wilmette, Illinois, until 8:00 P.M., C.D.S.T., October 4, 1955, and at that time publicly opened and read in the Council Room, on the following:

DIVISION "F"—24 INCH WATER MAIN CONSTRUCTION

Construct a 24" Water Main from a connection with the present 24" main in the alley north of Lake Avenue at 17th Street, thence south in 17th Street to Wilmette Avenue, west on Wilmette Avenue to Laramie Avenue, north on Laramie Avenue and connecting with proposed 3,950,000 gallon Steel Standpipe located on Village-owned property, complete, including connections to existing water distribution system, valves, valve vaults and appurtenances and installation of an altitude valve at and changes in connections to the present elevated tank on Ridge Road south of Lake Avenue.

DIVISION "G"—STANDPIPE FOUNDATION, VALVE VAULTS AND APPURTENANCES

Construction of reinforced concrete foundation for 3,950,000 gallon steel standpipe with valve vault and appurtenances on the Village-owned property located on Laramie Avenue in the Village of Wilmette, Illinois (steel standpipe to be furnished by others), and construction of a valve vault and appurtenances on the site of the existing four-hundred thousand (400,000) gallon steel elevated tank located on Ridge Road in the Village of Wilmette.

DIVISION "H"—STEEL STANDPIPE

Design, fabricate, and erect a 3,950,000 gallon steel standpipe on concrete foundation built by others on the Village-owned property located on Laramie Avenue in the Village of Wilmette, Illinois.

The Contract Documents, including plans and specifications, are on file and may be examined at the office of the Department of Public Works in the Village Hall, Wilmette, Illinois, and at the office of Alvord, Burdick and Howson, Engineers, 20 North Wacker Drive, Chicago 6, Illinois.

Copies of Contract Documents may be obtained from the Department of Public Works of the Village of Wilmette or from Alvord, Burdick and Howson by depositing cash or a certified check payable to the Village of Wilmette in the amount of Twenty-five dollars ($25.00) for each set of documents so obtained. The amount of the deposit for one set of documents will be refunded to each actual bidder who returns the contract documents in good condition within ten (10) days after the opening of bids. Additional copies of the contract documents may be obtained for the same price with no refund.

Each bidder shall deposit with the proposal, a check certified by a responsible bank payable to the order of the Village of Wilmette, for a sum not less than five (5) per cent of the aggregate of the proposal, which shall be forfeited in case the contractor fails to enter into contract with good and sufficient bond within ten (10) days after notification by the Village of Wilmette to the bidder that the contract has been awarded to him. The successful bidder will be required to furnish a Performance Bond in the sum equal to the contract price in form and with surety satisfactory to the President and Board of Trustees of the Village of Wilmette.

No proposal may be withdrawn without the consent of the Village of Wilmette, Illinois, for a period of sixty (60) days after the time for opening bids is passed.

The right is reserved to reject any or all bids or waive any informality in any bids and to accept any considered advantage to the Village of Wilmette, Illinois.

MARY ELIZABETH BRUSH
Village Clerk of the Village of Wilmette, Illinois
DATED: September 8, 1955

Read the Official Proposal Columns of
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This Week and Every Week

EMPLOYMENT OPPORTUNITIES

The Advertisements in this section include all employment opportunities—executive, management, technical, selling, office, skilled, manual, etc.

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Please write furnishing complete chronological experience record and salary history, also full details regarding education, salary desired, businesss and character references.

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SAN FRANCISCO: 68 Post St. (4)

POSITIONS VACANT

Construction Foreman for firm engaged in extensive sewer, water main and treatment plant facilities. Permanent position in N. Y. State area. Only qualified applicants with broad experience. P-6595, Engineering News-Record.

Engineer—Estimator, foreman, for sewer, water and roadwork. Must be top man, willing to work hard. The Forest Company, 121 North Main St., Wharton, N. J. Phone Dover 6-2320.

Civil Engineer—For asst. city engineer position. Must be P.E. with experience in construction and design. Civil Service tenure. Salary $645 to $724 per mo. Max. age 50. For details write to Civil Service Office, City Hall, Dearborn, Mich.

Superintendents and Foremen for firm utilizing all types of construction equipment. Must have extensive mechanical experience, proven ability to supervise operators and mechanics. Permanent locations, good starting salary and opportunity for advancement. Send complete details of background, experience and salary requirements to: Box P-7624, Engineering News-Record.

Engineers experienced in water and sewage works projects or related fields. Opportunity for permanent connection with long established consulting firm. Please state full qualifications, experience, references and salary requirements. Location Ohio. P-7504, Engineering News-Record.

Estimator—Engineering graduate with several years experience in estimating costs of oil refineries and chemical plants for contractor in Chicago area. Submit complete resume and photograph indicating education, experience and salary requirement. Box P-7614, Engineering News-Record, 330 W. 42nd Street, New York 36, N. Y.

Highway and Bridge designers and draftsmen. Positions open for men experienced in the design of highways and bridges. Long established Pennsylvania firm. Steady program of work. Usual employee benefits. Please submit information concerning education, complete experience, references, salary requirements, and availability. P-7615, Engineering News-Record.

Engineers—Experienced in design and preparation of plans for water works and sewerage systems and structural design. Advise education, experience, salary requirements and when available. Location Eastern New York. Reply P-7657, Engineering News-Record.

Architect—Qualified through training and experience to design churches, schools and other buildings. Give full information as to education, experience, salary requirements and when available. Location Eastern New York. P-7658, Engineering News-Record.

POSITIONS VACANT

Engineer—Experienced at design and detailing of reinforced concrete and structural steel for highway structures. Location, Upper New York State. Please send complete experience record and salary required. P-7660, Engineering News-Record.

Graduate Civil Engineers not over 27 and single, or if married, willing to move. Must have military training completed and interested in learning building construction business. We offer opportunity for rapid advancement to ambitious, hard-working young men willing to accept responsibility. Starting salary $92.50 if unexperienced with higher rates for those with experience. Some engineers increase their salary 20% within one year. Send complete history data. Martin K. Eby Construction Co., Inc., 610 N. Main, Wichita, Kansas.

Structural Engineer — Memphis Tennessee Registered, experienced in design and inspection of steel and reinforced concrete. Choice opportunity with long-established engineering firm. Not a traveling job. Excellent pay and benefits commensurate with ability and responsibility. An immediate opportunity for the right man. Reply with resume of education. P-7669, Engineering News-Record.

Estimator for established firm engaged in the engineering and construction of complete industrial plants. Should have at least five years experience in pricing labor and material on large scale industrial projects. Location, Pittsburgh. Please furnish resume of experience and training. P-7647, Engineering News-Record.

Municipal engineer for the Village of Ossining. General knowledge of water works, sewers, streets. Preparation of plans and specifications, etc. Mail resume with name, address and salary requirements. Ubaldo Marino, 6 Croton Ave., Ossining, New York.

Wanted Engineer-Superintendent for heavy excavation and grading on roads, airports, etc. Must be graduate engineer between 30-40 years old who has been actively engaged in actually doing this type of work for at least the last five years in this capacity. This is a permanent position with a substantial company in New York State. The opening has a real future for the right man. Salary open. P-7560, Engineering News-Record.

Building Construction Superintendent — Wanted at once for large school project in Cedar Rapids. Must be well qualified and experienced. Project duration approximately two (2) years. Position permanent for right man. Write stating qualifications, habits, experience, previous employment, references, availability, and salary expected. Address reply to R. F. Ball Construction Company, Inc., Post Office Box 2300, San Antonio, Texas.

The Washington State Highway Commission announces immediate openings for civil engineering graduates for permanent Merit System bridge design work in Olympia, $380-451, two yrs. exp., $414-492. Three yrs. exp., $432-514. Also consider exp. rodmen, chainmen, $320-380, and instrumentmen, $380-451, for various locations west of Cascade Mountains. Liberal vacation, sick leave. 40-hr. week. Retirement system. Write Personnel Officer, 220 Transportation Bldg., Olympia, Washington.

Assistant Estimator experienced in blue print reading, required to make quantity take-off and expediting materials. Excellent opportunity for a young energetic man. Peter Schumacher & Sons, General Contractors, P. O. Box 375, Mishawaka, Indiana.

Wanted, Draftsman or engineering aide for city engineering department. Submit complete resume and salary requirements and earliest date available to City Engineer, City of Owosso, Michigan.

POSITIONS VACANT

Structural Engineer for building design Ketchum and Konkel, Consulting Engineers, 1090 Fox Street, Denver 4, Colorado.

Experienced Estimator: Permanent position with large General Contractor in the South. Want man who can prepare quantity surveys and has knowledge of construction costs. Salary open. P-7708, Engineering News-Record.

Connecticut Contractor, specializing in commercial and industrial building construction, looking for competent estimator, engineering background required. Must have extensive experience and be capable of assuming complete charge upon the eventual retirement of top official. Reply P. O. Box 1059, New Haven, Conn.

Sales Engineer, with structural training for sales promotion of precast concrete building products in Western New York, calling on architects, engineers, contractors, for well known and long established firm. Write giving full qualifications, experience, and salary expected. P-7722, Engineering News-Record.

Construction Superintendent—Engineer Govt. work. New organization desires to supplement key personnel. Opportunity for right person. Replies will be held in confidence. P-7766, Engineering News-Record.

SELLING OPPORTUNITY OFFERED

Salesman, construction equipment, have exclusive New York City territory for one of leading dealers. Extensive experience necessary. RW-7721, Engineering News-Record.

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Master Driller wants foreign assignment thoroughly qualified—entire profession excellent health, resourceful-dependable speaks English, Spanish, German, Turkish. William Nann, Box 26, Mahwah, New Jersey.

Executive—Office Manager—18 years with heavy construction contractor, main office. Thoroughly experienced in all phases of office procedure—finance, insurance, payrolls, etc. A1 business and character references. Interested in connecting with progressive organization. New York Metropolitan Area. PW-7640, Engineering News-Record.

Experienced Surveying Crew available with equipment. D. G. Hollister, Old Forge, N. Y.

Superintendent—Maintenance 27 years experience in firebrick & chemical brick construction desires position in Western states. Oil refinery, chemical plant or steel plant. Apply to PW-7701, Engineering News-Record.

Bridge and Highway Engineer desires foreign position involving wide responsibilities. Thoroughly experienced in design, construction and supervision, possesses knowledge of many languages and ability to organize and train foreign personnel such as detailers, draftsmen etc. At present employed with large New York Consulting firm on foreign project. Available immediately. Request A. P. 862, San Salvador, Central America.

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Civil Engineer, B.S.C.E. '54. Desires to relocate East or West coast with fabricator, contractor or consultant. Age 31, married. PW-7751, Engineering News-Record.

Civil Engineer—33, B.C.E. 6 years experience in steel erection and design. Have had responsible assignments in structural, plate, and pipe work, heavy machine installation and steel plant construction. PW-7715, Engineering News-Record.

Engineer-Estimator 29, BSCE, 5 years field engineer heavy construction, 1 year office engineer and estimator. Desires office position. Will relocate. PW-7750, Engineering News-Record.

Admin Exec for Cpff or lump sum const. Hvy. admin. & legal exper. on high executive level. Age thirty five. Resume on request. PW-7755, Engineering News-Record.

Controller seeking post with responsibility for administration, budget, financial control, planning, economic analyses, preparation and control of engineering or construction costs, progress schedules and reports. Engineering and accounting experience. Mature. PW-7763, Engineering News-Record.

WORK WANTED

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Experienced Superintendent

In heavy earth and rock evacuation using modern type equipment. Send resume of experience and references.

P-7663, Engineering News-Record
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P-7710, Engineering News-Record
520 No. Michigan Ave., Chicago 11, Ill.

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P-7661, Engineering News-Record
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Send complete record of age, training, experience, employment and salary desired with first letter. All applications held strictly confidential and will be acknowledged promptly.

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P-7320, Engineering News-Record
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P-7668, Engineering News-Record
520 No. Michigan Ave., Chicago 11, Ill.

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Masters Degree, Soils Mechanics preferable. 2 to 4 years soils investigations including exploration, analyses and design.

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Graduate Engineer with at least 8 years' experience in design of structures, utilities and roads. Civil Engineer preferred.

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Must have degree in Electrical Engineering and 6 years' experience in design of power and distribution. Must be able to coordinate all electrical engineering work in field.

Write, giving detailed account of experience, education, etc.

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P-7746, Engineering News-Record
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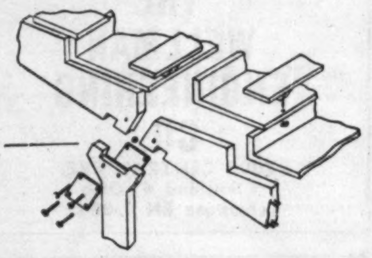

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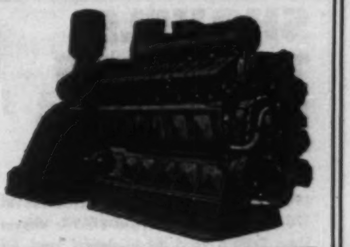

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700	Worthington	EE-8	1000	327
675	Fairbanks Morse	38D	960	720
500	General Motors	8-567	720	720
500	Alco	6-12½x13T	750	600
350	Baldwin	VO-6	510	450
320	Enterprise	DSG-6	460	450

KW	Make	Mode	HP	RPM
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300	Fairbanks Morse	32E14	450	300
300	General Motors	8-268A	450	1200
250	Clark	GD-4	375	360
200	General Motors	8-268A	350	900
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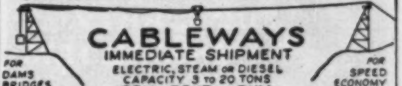

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mounted on skids with batchmeter, water tank, batch hopper and gate. Leroi gasoline engine. Good condition. $2750.00

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Four 200 HP, 3-phase, 60-cycle, 440 volt part winding increment starters with disconnect and start-stop buttons in cover.

W-7686, Engineering News-Record
1111 Wilshire Blvd., Los Angeles, Calif.

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Manitowoc Cranes
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FS-7756, Engineering News-Record
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EDITORIALS

Straws in the Wind

Public works, both federal and federal-aided, are going to bulk larger in the construction totals for several years in the future than they have in the recent past. The latest review of federal expenditures put out by the Budget Bureau makes this plain by calling attention to the continuing nature of Congressional commitments—new programs of aid for civil airports, urban renewal and college housing, for example. And one of the biggest hidden commitments resides in the new river projects permitted to be started by the Corps of Engineers and the Bureau of Reclamation—twice as many as the President requested. Moreover, the highway commitment is yet to be made. More busy years lie ahead for construction.

Better Architects, Better Building

A movement is under way, sparked by the American Institute of Architects, to enlarge the opportunities for post graduate education on the part of practicing architects. It has not advanced very far, but the objective is worth pursuing not only because professional men owe it to themselves and the general public to keep up to date in their technology, but because these adult education programs are also visualized as aiding in greater integration of the many elements in the building industry. Such integration has long been sought, and any contribution that can advance it is worthwhile.

The necessity for professional men to expand continually on what they have learned from schooling and daily practice in order to keep abreast of a changing and developing technology is well recognized. There are also precedents to prove that it can be done. Walter A. Taylor, director of the AIA department of education and research, recently pointed out that the medical profession had offered 1,100 courses in 49 subjects in a single year; also that 20,000 practicing lawyers are enrolled in special courses set up by the Practicing Law Institute. A few universities have sponsored post graduate courses for architects—and some for engineers, as in structural welding, prestressed concrete and bituminous paving—but no such broad scale attack, as exemplified by the doctors and lawyers, has previously been considered.

The AIA envisions the needed courses as taking in the whole process of building, from financing through design, materials development and construction, to operation and management. And it is by this approach that it would seek not only to expand knowledge in the various specialties, but to create a better mutual understanding and respect among the interdependent specialists in the building field.

About all that has happened so far is to persuade certain representatives of such other organizations as the American Society of Civil Engineers, the National Society of Professional Engineers, the Associated General Contractors and the American Society for Engineering Education to go along with a resolution urging schools of architecture to aid in the endeavor whenever possible. As a first step in exploring the possibilities of post graduate education for architects and other building specialists, this is all to the good.

But whether the plan advances any farther probably depends not so much on what the schools do as on the initiative of professional men themselves. Individually and through their professional organizations they will have to organize these courses on a local level, and then support and develop them to maximum usefulness. As was said in the beginning it is an objective worth pursuing. Expanding knowledge and greater solidarity are basic to the kind of building fraternity that our kind of a country needs.

Motels and New Highways

When Florida's legislature was considering plans to build a toll highway all down the peninsula from Jacksonville to Miami, one of the factors that led the members to authorize only the "Bobtail Turnpike" at the south end was vociferous opposition from owners of motels. The legislature listened, and no turnpike was authorized at the northern end.

When a similar situation developed in Alabama some months ago, the Supreme Court of the state came to a quite different conclusion. There, when a motel owner went to court to keep the state highway department from building a bypass around Montgomery—that would also bypass his motel—the court ruled that the controlling factor must be the good of the general public, not the convenience or financial gain of people on the highway from which traffic was to be diverted. As the highway director had determined that the bypass was necessary in the public interest, the court refused to halt it.

Fortunately, in most states, the day is long past when the location of new highways is determined by members of legislatures inclined to give more weight to public clamor than to abstract considerations of the public good. Only in the case of toll highways have state legislatures yielded to the old temptation to interfere, and even there, the fact that the new facility must earn enough to pay its way has tempered legislative action.

An interesting aspect of this whole situation is the fact that, in most instances, where local people have objected to construction of a bypass highway, the decline in local business has been of short duration. Often new business has more than offset any loss.

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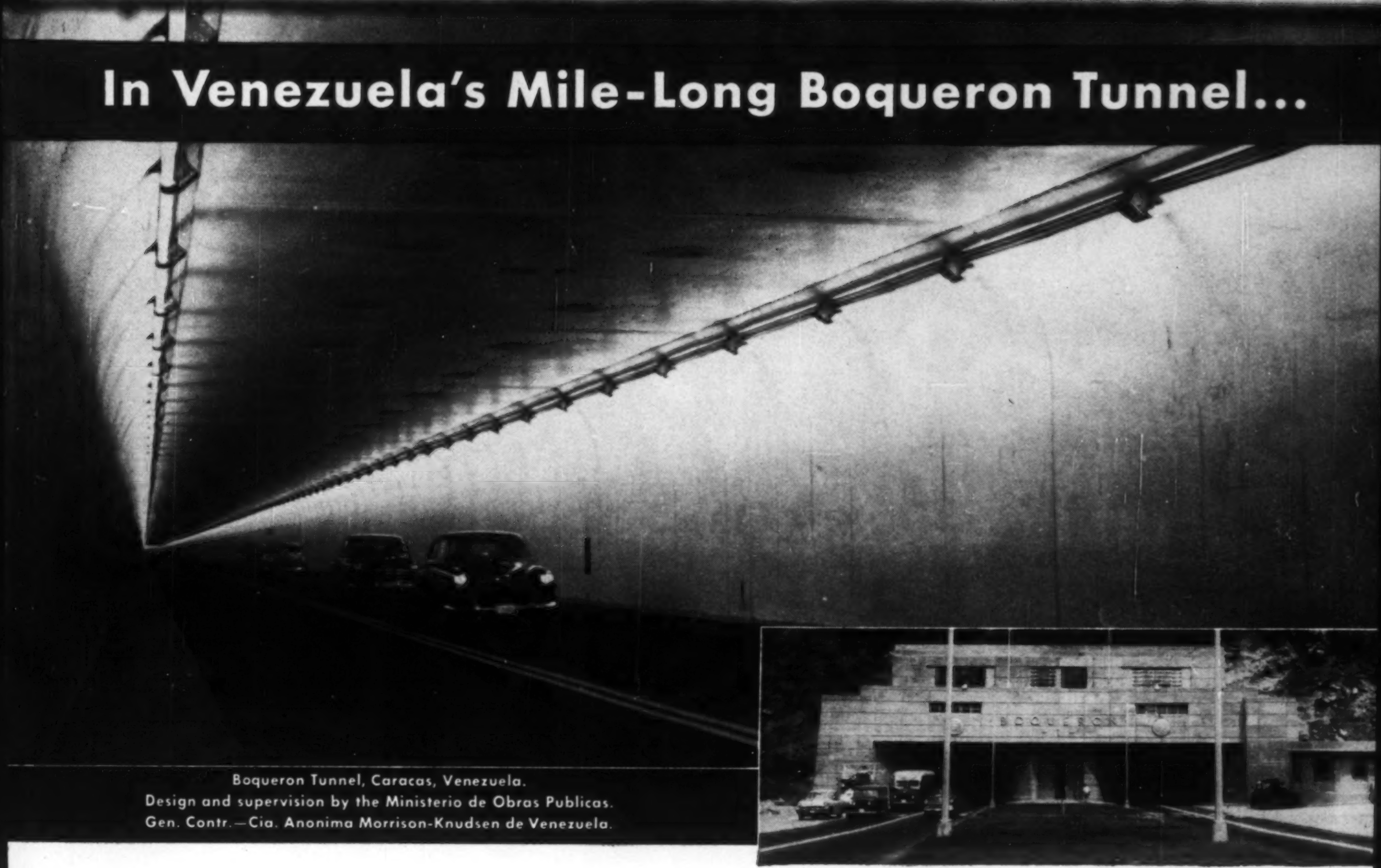

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